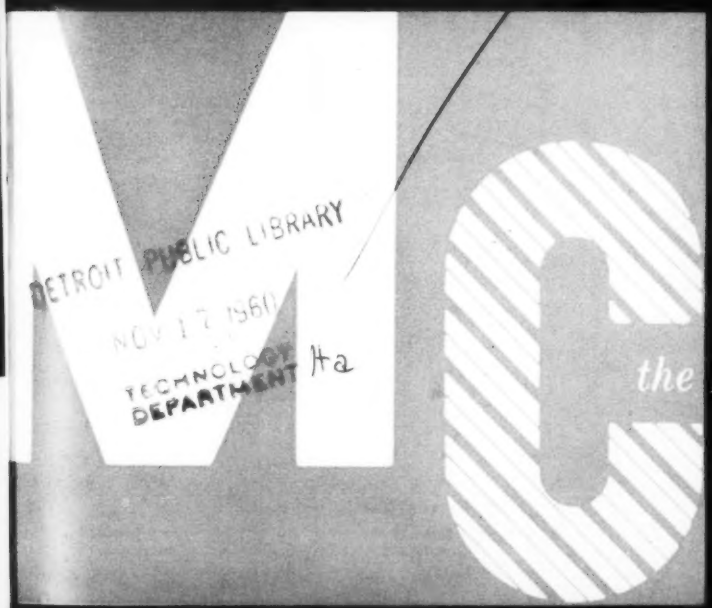
V40 #11

November / 1960

- *Basic facts for candymakers: Fats and oils*
- *Colors and the export market*
- *Enigmas of chocolate tempering*
- *A quality image for the retailer*



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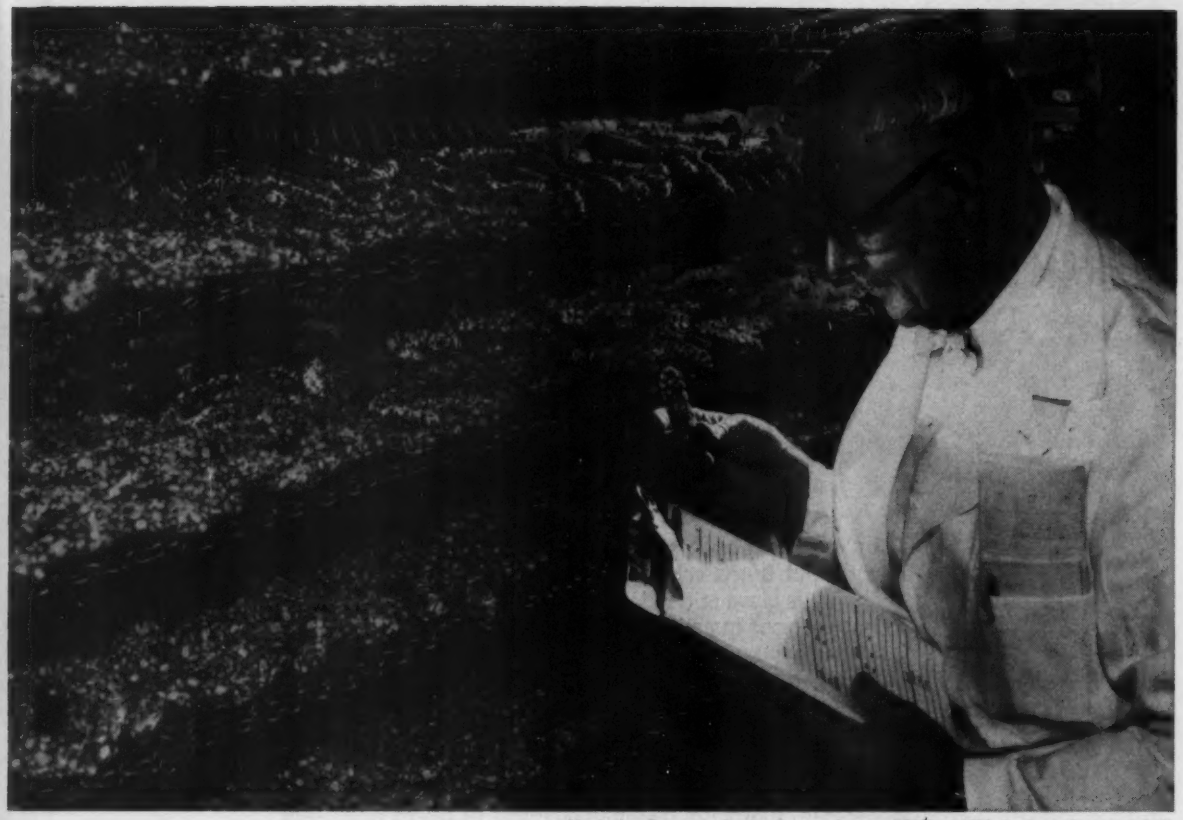

Mr. Irving Bessner checks the candy on a 170-foot USS Cyclone Conveyor belt.

Mr. Henry Schuemann, Assistant General Superintendent for all plants of the Curtiss Candy Company, Chicago, Illinois.

"Our candy cools while we're making it— on USS Cyclone Conveyor Belts"

"We've been cooling Baby Ruth candy on USS Cyclone Conveyor Belts for 35 years," reports Mr. Henry Schuemann, Assistant General Superintendent for all plants of the Curtiss Candy Company, Chicago, Illinois. "The installation of our two conveyor units was the first step in mechanization that has enabled us to increase production 100% in 40 years.

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"The Cyclone units we use consist of 14 continuously moving belts. We've been very satisfied with their performance," says Mr. Schuemann. "Some of the individual belts in use now have lasted 5 years, and they've never given us any maintenance problems."

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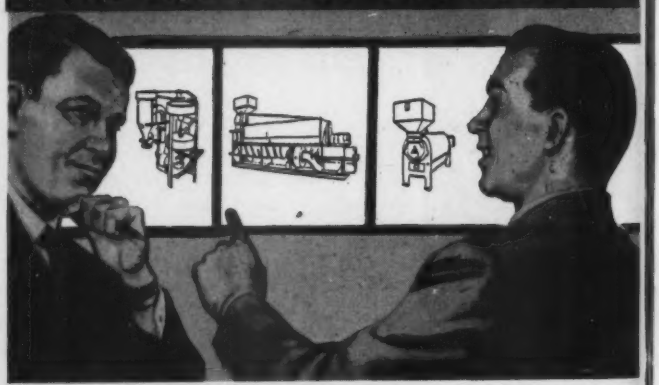

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FDA permits extension to 1963 for carbon black

In a meeting with confectionery industry leaders in Washington on September 28th the Food and Drug Administration officials agreed to provisionally list carbon black and charcoal with use permitted in accordance with present practice until January 1963. The meeting was sponsored by the National Confectioners Association and was attended by the Association's Washington Committee, Food and Drug Administration Problems Committee and Petrolatum Technical Committee.

The provisional listing of charcoal and carbon black was in accordance with the Color Additive Amendment passed in July of this year which provides for a two-and-a-half-year period in which colors (including white, black and intermediate grays) might be provisionally listed for use pending investigation regarding permanent certification.

The NCA's Mineral Oil and Petrolatum Technical Committee submitted a report of research on the development of a method of analysis to determine the amount of mineral oil and petrolatum required to be used in confectionery items. The method developed will be further tested in five laboratories in the confectionery industry and three FDA laboratories with the laboratories of the Association of Official Agricultural Chemists serving as referee. This was announced by Andrew Heide, Chairman of the committee.

Those attending the meeting from the candy field were L. R. Hopkins, R. O. A. Petersen, Andrew H. Heide, Charles A. Smylie, Otto H. Windt, Stephen T. Powers, Joseph E. Greninger, Robert Pulver and Gerald Doolin.

Bauman joins Andes Candies

William Bauman, who resigned as production manager of the Williamson Candy Company in 1959, has joined Andes Candies as plant superintendent. Andes is a Chicago based retail manufacturer with over 100 retail shops in the Chicago area and with a growing wholesale business.

Curtiss advances two execs and names a third

Curtiss Candy Company has named Lloyd B. Sheetz vice president in charge of marketing, and E. F. Anderson, director of sales succeeding Sheetz. Eugene R. Pillifant has joined Curtiss from Fairmont Foods Company as eastern manager.

August shows 14% increase

August 1960 sales were estimated at $83,285,000 accounting for a 14% increase over August 1959 sales. This figure was 37% over the July 1960 figure of $60,664,000.

The eight month estimated sales for 1960 are $691,595,000, 4% over the 1959 figure for the first eight months of that year. The eight month figure for package goods selling at $1.00 or more per pound shows the healthiest increase gaining 12% in pounds and 10% in value over the same period of 1959.

Item	Estimated sales of current month and comparison: August 1960 ($1,000)	August 1960 from August 1959	Estimated sales year to date: 8 months 1960 ($1,000)	Percent change from 8 months 1959
Confectionery and competitive chocolate products, estimated total	83,285	+14	691,595	+ 4
BY KIND OF BUSINESS:				
Manufacturer-wholesalers	66,045	+13	555,413	+ 4
Manufacturer-retailers[1]	4,279	+12	45,208	+ 4
Chocolate manufacturers	12,961	+21	90,974	+ 8
TOTAL ESTIMATED SALES OF MANUFACTURER-WHOLESALERS BY DIVISION AND STATES				
New England	7,341	+21	57,714	+ 2
Middle Atlantic	19,894	+22	167,842	+ 5
N. Y. and N. J.	13,547	+24	99,476	+ 2
Pa.	6,347	+20	68,366	+11
East North Central	24,783	+ 5	209,763	+ 3
Ill.	22,152	+ 4	185,838	+ 1
Ohio and Ind.	1,798	+24	16,371	+48
Mich. and Wis.	833	+ 2	7,554	— 5
West North Central	2,890	+17	24,750	+ 7
Minn., Kan., S. Dak., and Neb.	1,564	+24	14,925	+ 9
Iowa and Mo.	1,326	+ 9	9,825	+ 3
South Atlantic	3,510	+ 7	27,758	+ 1
Md., D. of C., Va., W. Va., N. Car., and S. Car.	1,400	+ 1	12,102	+ 1
Ga. and Fla.	2,110	+11	15,656	+ 1
East South Central: Ky., Tenn., Ala., and Miss.	1,514	+ 4	12,412	— 5
West South Central: Ark., La., Okla., and Tex.	1,396	+18	16,763	+11
Mountain: Ariz., Colo., N. Mex. and Utah	623	— 6	6,148	— 1
Pacific	4,094	+17	32,263	+ 5
Calif.	3,208	+11	26,136	+ 4
Wash. and Ore.	886	+44	6,127	+11

[1]Retailers with two or more outlets.

Type of product[1]	August 1960 Pounds (1,000)	August 1960 Value ($1,000)	First 8 months Pounds (1,000) Percent change from 1959	First 8 months Value ($1,000) Percent change from 1959
TOTAL SALES OF SELECTED ESTABLISHMENTS	107,922	41,547	826,882 + 3	329,278 + 2
Package goods made to retail at:				
$1 or more per lb.	1,859	1,768	24,146 +12	27,510 +10
$.50 to $.99 per lb.	8,540	4,316	62,286 + 8	32,977 + 6
Less than $.50 per lb.	15,906	4,265	129,598 — 4	33,768 — 5
Bar goods	47,393	19,218	378,179 + 1	153,172 — 1
5¢ and 10¢ specialties	14,887	6,556	104,819 + 4	46,839 + 5
Bulk goods[2]	19,337	5,424	127,854 + 9	35,012 +11

[1]Selected group of large manufacturer-wholesalers and chocolate manufacturers report sales by type of product. Companies reporting such detail account for approximately half of the total dollar sales of manufacturers.

[2]Includes penny goods.

Data from monthly *"Current Industrial Reports"* of the U. S. Department of Commerce.

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Johnny Johnson tees off with an oversize candy cane to call attention to the 1961 golf tournament scheduled for June 12th in conjunction with the National Confectioners Association 78th annual convention in Chicago. Johnson, chairman of the golf committee, announced that the tournament will be played at the Elmhurst Country Club, Elmhurst, Illinois and at Brookwood Country Club near-by. The awards dinner will be held at the Elmhurst Club.

Kraft joins NCA

The National Confectioners Association has announced that Kraft Foods of Chicago has been accepted as an active member of the association effective January first, 1961. Kraft is one of the leading producers of packaged and bagged candies, including caramels and marshmallow items.

Young joins Cook Chocolate

Robert J. Young Jr. has ben appointed director of engineering for Cook Chocolate Company, Chicago. Mr. Young comes to Cook from Klein Chocolate Company, Elizabethtown, Pennsylvania and prior to his association with that company he was with Bowey's Inc. of Brooklyn, New York for twenty years. Young's appointment to this newly-created position is part of Cook's expansion plans scheduled for the next few years.

The company also announced that William G. Wolfe is now in charge of new plant developments at their Chicago and Campbellford, Ontario plants; M. O. Ricker is in charge of quality control and new product development and Roy Berg is in charge of production and factory personnel for both the cocoa and chocolate plants.

15 cent Mars bar introduced

Mars, Incorporated has introduced a fifteen cent Mars bar for the theatre and retail trade. The Mars bar is the fourth of the company's line to be produced in the fifteen cent size joining the Milky Way, Snickers and 3 Musketeers bars. Normal production of the ten cent Mars bar will be continued.

More PR fund contributors

The Candy, Chocolate and Confectionery Institute has released the names of thirty-one additional subscribers to the public relations fund drive. The firms, whose pledges were received after the first honor roll was released on October 1st, are as follows: Kraft Foods, Chicago, Illinois; Brown and Haley, Tacoma, Wash.; Stuckeys Inc., Eastman, Ga.; Western Confectionery Salesmen's Association, Oak Park, Illinois; Myers-Cox Co., Dubuque, Ia.; Hoosier Brokerage Co., Indianapolis, Ind.; Mootz Candy Co., Pottsville, Pa.; Peters Chocolate Shop, Butler, Pa.; Pottsville Tobacco Co., Pine Grove, Pa.; G. & T. Candy Co., York, Pa.; Nastri Bros., Inc., Waterbury, Conn., and Almy Bros., Binghamton, N. Y.

Also The Candy Box, Marysville, Calif.; W. I. Grandison Confectionery, Buffalo, N. Y.; H. Evans Smith, Baltimore, Md.; Francis A. Shinnamon, Ellicott City, Md.; Milton Rodberg, Baltimore, Md.; Wm. S. Orlove, Silver Spring, Md.; Felter H. Rose, Baltimore, Md.; Harry Green & Son, Baltimore, Md.; B. Weldon Sprecher, Baltimore, Md.; G. Austin Sprecher, Baltimore, Md.; Wm. C. Meyers, Jr. & Co., Queensboro, Md.; Edwin F. Barock, Baltimore, Md.; Haug & Co., Inc., New York, N. Y., and R. M. Palmer Co., West Reading, Pa.

Also J. L. Culpepper Co., Richmond, Va.; Joe W. Latshaw, Hopkins, Minn.; Woodward & Dickerson, Inc., Philadelphia, Pa.; Hy Falkowitz, Syracuse, N. Y., and Milkmac Candy Co., Baltimore, Md.

New exec at Whitman's

Bruce C. Mapes has joined Stephen F. Whitman & Son as regional manager for the company's Self Service line. Mr. Maples, who was formerly eastern sales manager for Kaiser Aluminum Company, will work with Whitman's brokers' representatives and major accounts in all marketing areas. In addition Mr. Maples will be responsible for the development and execution of sales and marketing programs on Whitman's line of window box chocolates for the supermarket trade.

Wolflisberg president of AIDA

The International Association of Food Distribution (or Association Internationale de la Distribution des Produits Alimentaries) has elected Hans J. Wolflisberg, president. Mr. Wolflisberg, president of The Nestle Company, was previously named chairman of the Fifth International Food Congress to be held in New York City in 1962 under the sponsorship of AIDA.

Continued on page 51

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Europe's best... SIG now comes to America through GREER new U.S. sales representatives for SIG wrapping machines

Effective immediately, Greer has been appointed sales representative in the United States for SIG Wrapping Machines, manufactured by the Swiss Industrial Company in Neuhausen Rhine Falls, Switzerland.

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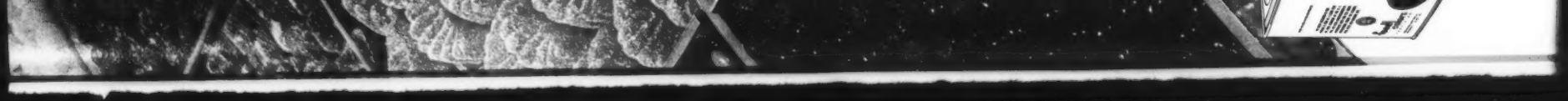

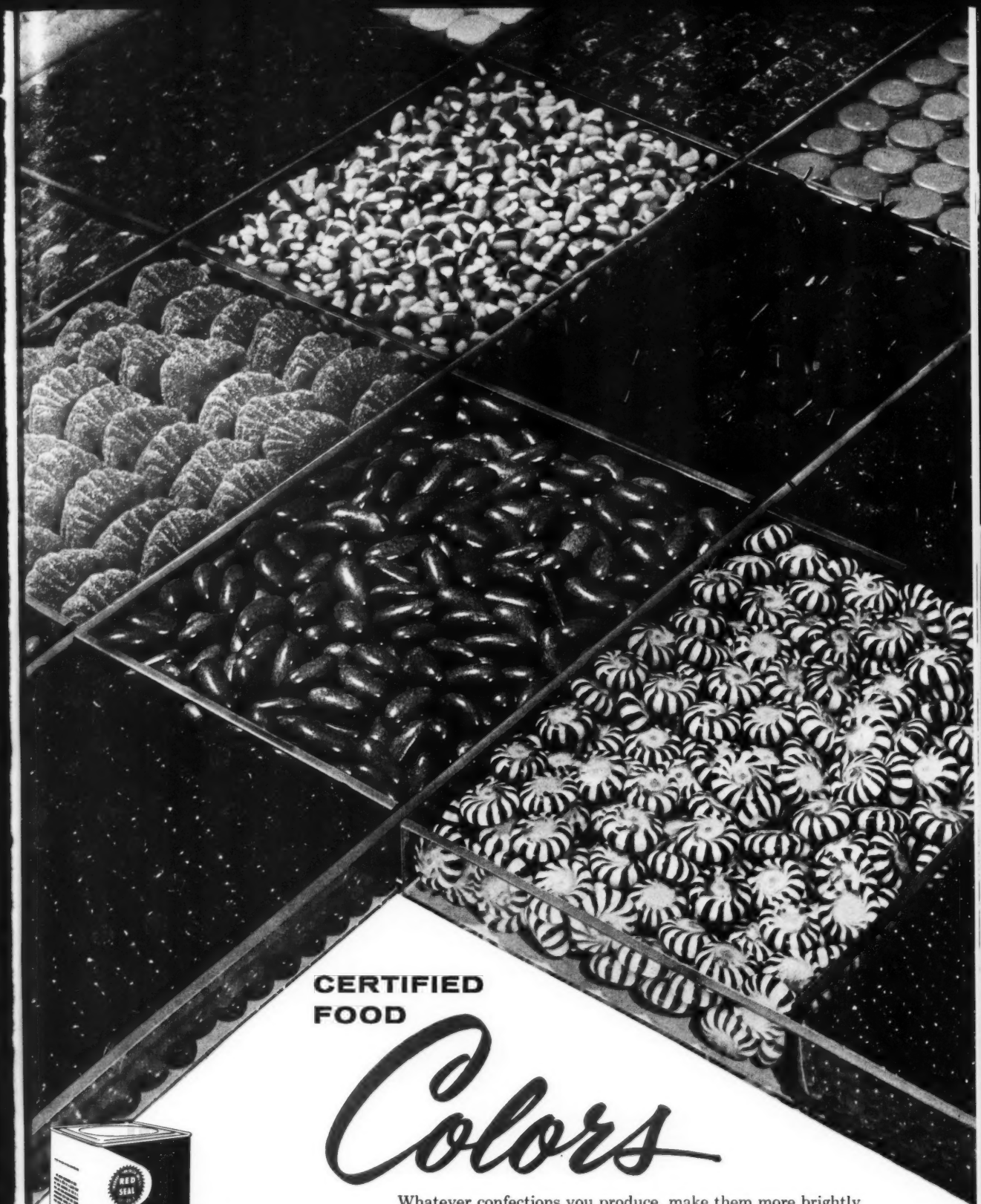

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November, 1960 Volume XL—Number 11

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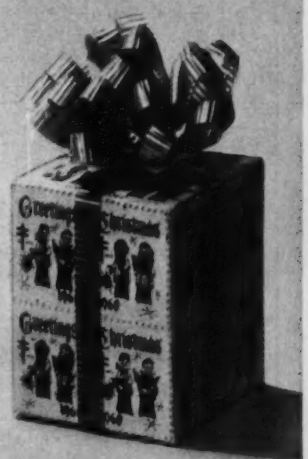

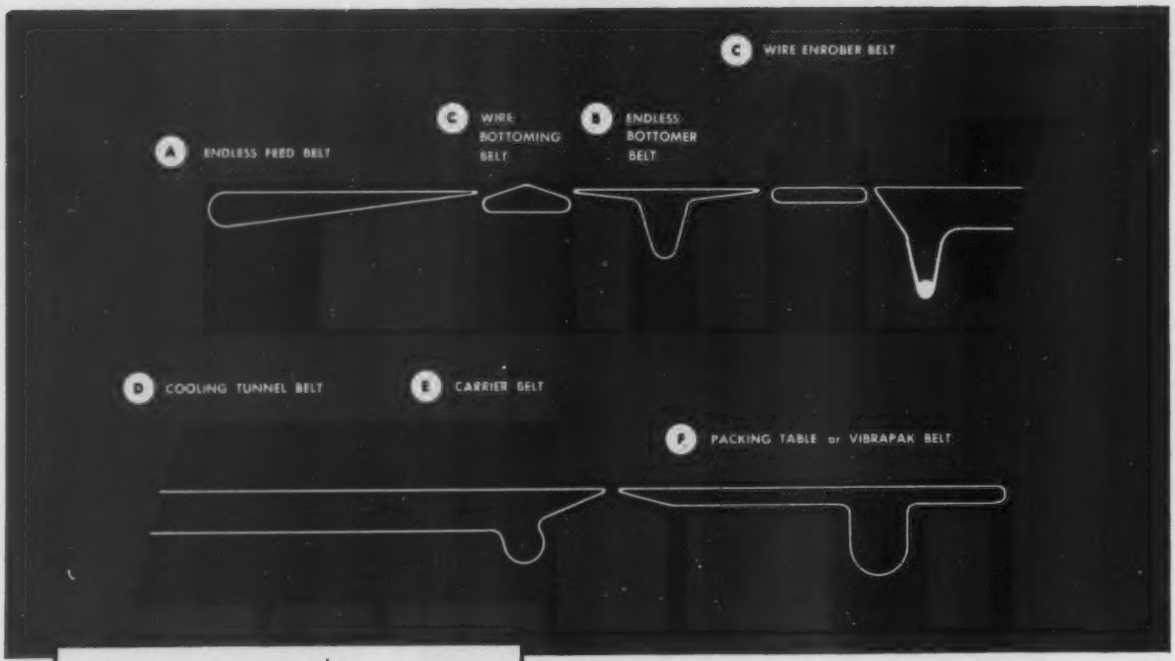
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The sweet and the sour

By Stanley E. Allured
Editor

The people of Tunisia were introduced to the appeal of Salt Water Taffy last month, courtesy of the United States Government and the American Molasses Company. The occasion is the Eighth International Trade Fair at Tunis, at which the Office of International Trade Fairs of the U. S. Department of Commerce participates for the purpose of exposing the fruits of free American enterprise to other peoples. Nearly half a million Tunisians are expected to view an extensive American exhibit.

Salt water taffy was not chosen just to show one of the most American of candies, but to illustrate the mechanization involved in making, wrapping and packaging this item. Most ingredients are supplied by American Molasses Company, with Fred Janssen supplying the formulation and the production set-ups. Thomas A. Mealey, Philadelphia candymaker, will head up the project.

This is a well chosen item, and with Fred on the job, it will certainly be well organized. I only regret that I could not be there to see the effect of this mass sampling program.

According to Moscow Radio, the first cocoa beans grown in Russia have been made into chocolate this year. Cuttings from hot houses in Moscow were transplanted in the Caucasus area, and have begun bearing.

On top of the present problems of estimating bean production, the necessity of getting accurate estimates from Russia on production is enough to lift the hair from the heads already tortured from the problems of estimating production in far more friendly and cooperative countries.

An old familiar landmark of science disappeared recently when the international standard of length became based on wavelengths of light. The platinum-iridium meter bar, long associated with the ultimate in accuracy, has been relegated to history.

According to an announcement from the National Bureau of Standards any well equipped laboratory (sic) can reproduce this new standard of measurement (1,650,763.73 times the wavelength of krypton 86 at the temperature of liquid nitrogen.

Hershey Chocolate Corporation has purchased land in Ontario, Canada, at Smith Falls, for a chocolate factory. This represents the first movement of a large U. S. chocolate manufacturer into another country. According to Canadian newspaper reports construction will begin next April of a $7 million factory to employ 350 persons.

From the projected size of the operation it seems clear that production will not be only for the Canadian home market. With sugar about 2 cents per pound cheaper and milk

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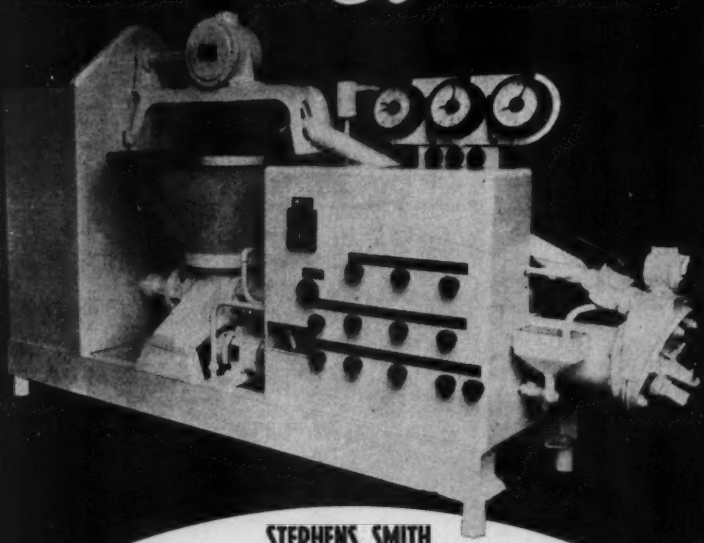

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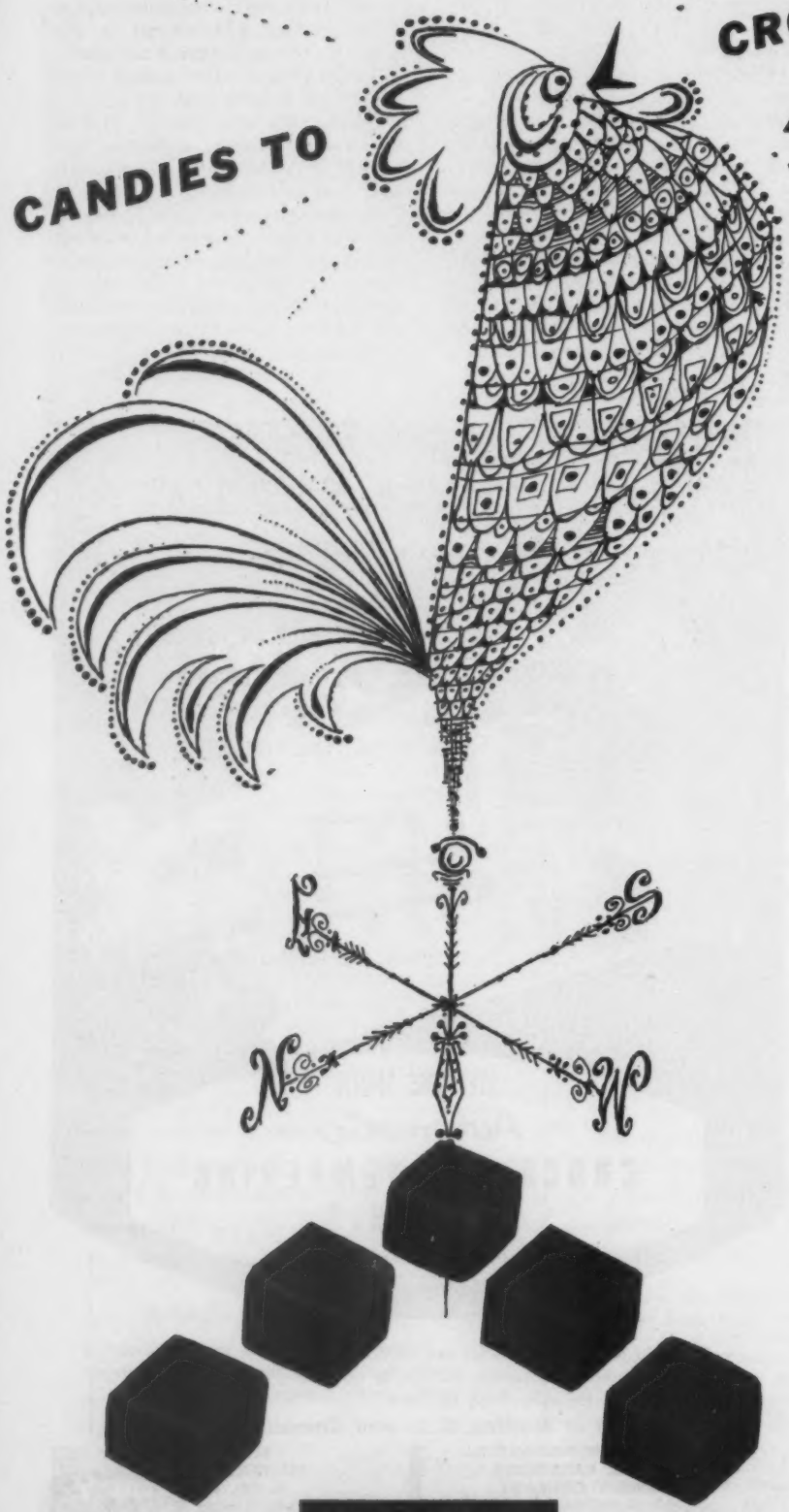

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about one third under U. S. prices, Hershey will be in a much better export position from this new factory. Since the Canadian operation will benefit from the "Imperial Preference" tariff to all the commonwealth countries (combined population, about 500,000,000), Hershey will be able to compete directly with Cadbury on even terms.

The industry PR program is about four fifths pledged and still without a pledge from the two biggest firms. It is still touch-and-go as to whether it will get off the ground. Every firm who intends to pledge, but just put it off, had better get out the pen and get busy. "Next time" may be years away and much too late.

Bulk wrapped hard candy has become almost as common in the produce section of supers as potatoes. "Weigh and Pay" in food stores mirrors the successful "Pick and Mix" in variety stores. Unfortunately, a disproportionate amount of this candy is imported, due partly to its fancy wrappings and higher price mark-up.

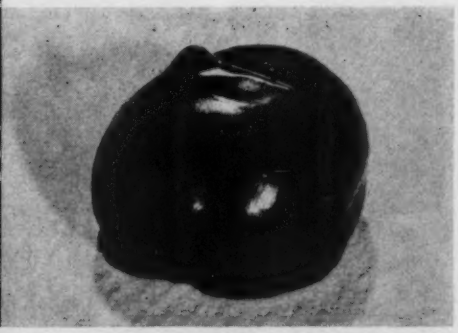
Malcomb George of American Stores, country's fifth largest super chain, spoke in Philadelphia of the great need for more candy merchandising information to buyers. The great need is for point-of-purchase material for such occasions as Mother's Day, Sweetest Day, Picnic time, etc., where no individual candy company can afford to provide a full supply. What is needed is industry-wide, specialized P.O.P. material for use in chain stores, and independents, for each of the seasons and special "days". Note reference to the industry PR program above, the only really logical place for the origination and distribution of this type of material.

With more continuous processing equipment becoming available, and in more common use, candy manufacturers will find more and more pressure on their old formulas and procedures. The key to a successful item is not the formula, but the finished product, and there are plenty of examples where another road to the same product has been found to be more efficient, and has given additional advantages of longer shelf-life and better eating quality. Changes in formula and procedure do not have to mean a "cheaper" piece in the sense of eating quality.

If new raw materials and machinery are rejected out-of-hand as factors that "cheapen" candy, the door is closed to all progress. While it is certainly true that many changes have resulted in cheapening value and quality, some notable examples remain of outstanding achievements in the utilization of new materials and methods to provide a better eating piece of candy at a lower cost. This places both a heavy responsibility and a great opportunity on the shoulders of the candy technologist. If management will give him the backing for both small and large scale trial production runs of ideas incorporating these new developments, strikingly new and appealing candies might well develop, and provide a real shot in the arm to stagnant per capita consumption.

TAKE A CLOSER LOOK

at your candy production picture



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Some months back, Delson Candy Company beat the FDA on a "deceptive packaging" case, and thereby fought a battle for the entire industry. While it is not certain at this time whether the FDA will appeal the decision, for all practical purposes, the subject of deceptive packaging is dead.

The industry can be eternally thankful that the FDA picked on a company like Deran who could not be intimidated by the giant bureaucratic organization with unlimited funds and legal talent available, who valued the principle of independent business high enough that it did not take the easy way out, by accepting a consent decree, but defended its record and practice vigorously and successfully.

Candy for fund raising is spreading like wild fire through the industry, and practically every type of candy has been adapted for this purpose, to challenge the more familiar types such as brittles, mints, etc. The Lion's clubs in Illinois recently put on their campaign featuring the hard candy rolls of F&F Laboratories and cleared over $250,000.

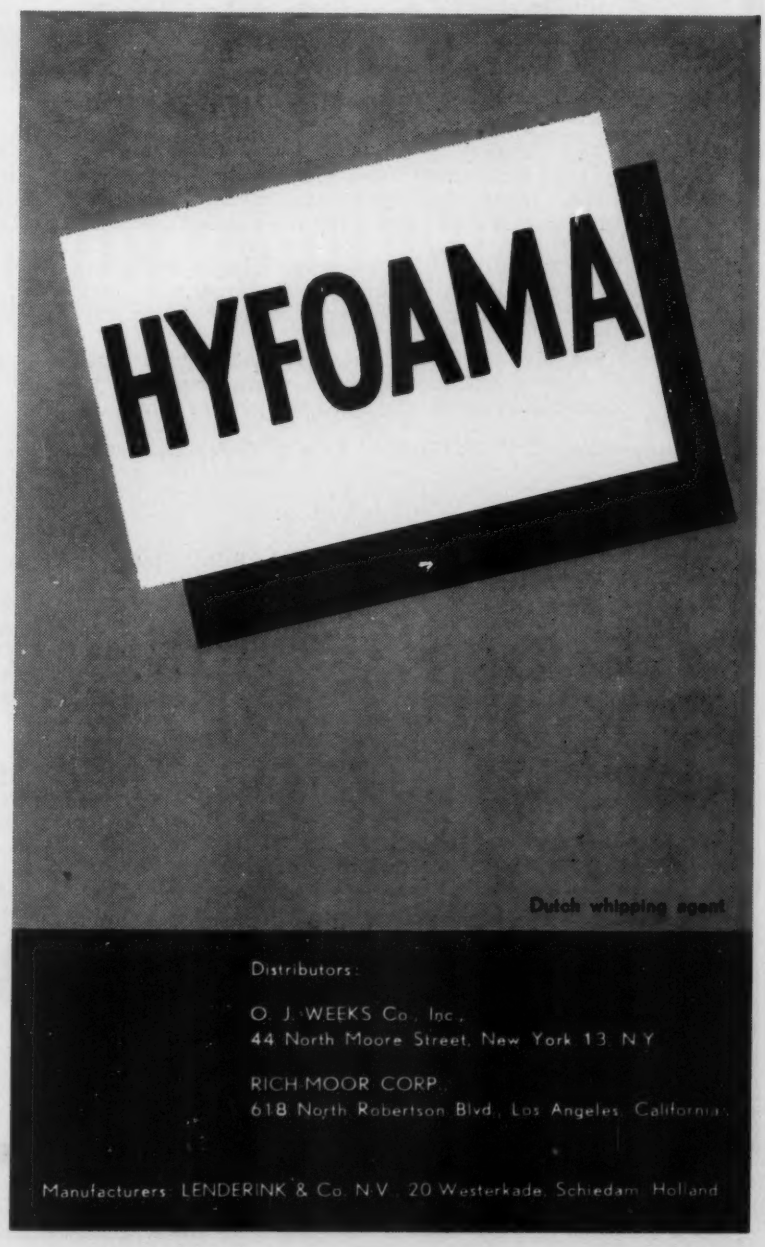
Counting church groups, PTAs, service clubs (Lions, Elks, etc), boy and girl scouts, and a host of benefit associations, the potential sales to this type of market seem almost limitless.

A factor that cannot be overlooked in this picture is the basic benefit accruing to the industry from the association of its products with charitable causes. This association of terms, emphasizing high ideals, and altruistic effort cannot help but improve the image of the industry in the eyes of the general public!

Close to press time a new list of contributions to the PR fund was released. These names are in addition to those listed in the "Candy Business" section of this issue.

The Bianchi Co., New York, N. Y.; Buffalo & Western New York Confectioners Association, Buffalo, N. Y.; King Cole Ice Cream Corp., Utica, N. Y.; Sidney Goldberg, New York, N. Y.; New York Candy Club, New York, N. Y.; Critchley's Candies, Tenafly, N. J.; Donald Elliott, Baltimore, Md.; Hanscom Brothers, Inc., Philadelphia, Pa.; Keppel's, Inc., Lancaster, Pa.; Klein Chocolate Co., Towson, Md.; Klein Chocolate Co., Shillinton, Pa.; Milkmac Candy Co., Baltimore, Md.; James P. Linette Co., Inc., Reading, Pa.; Luke F. Reilly, Haverford, Pa.; Vend, Inc., York, Pa.; H. S. Tellam, Baltimore, Md.; Watson & Smith, Baltimore, Md.; Frank H. Fleer Corp., Philadelphia, Pa.; Crawford's Candies, Inc., Ambler, Pa.

Also R. S. Barclay Co., Atlanta, Ga.; Boyd Bros., Huntington, West Virginia; Linker Cigar Co., Louisville, Ky.; A. C. Sunkel Co., New Orleans, La.; Al Bagel, Chicago, Ill.; The Kallerman Co., Chicago, Ill.; C & C Candies, Inc., Chicago, Ill.; Kimbell Candy Co., Chicago, Ill.; David T. Leathly, Lavonia, Mich.; James A. Patterson Co., Kenilworth, Ill.; Peanut Specialty Co., Chicago, Ill.; Arthur L. Waldner, Chicago, Ill.; Don J. Reinertsen, Milwaukee, Wis.; Wally Sinterman, Garden City, Mich.; Robert A. Berman & Co., Madison, Wis.; Burrell Belting Co., Skokie, Ill.; White-Stokes Co., Chicago, Ill.; Tom Hawkins Co., St. Louis, Mo.; Hyde Bros., Witchita, Kansas; Jarvis-Ideal Candy Shop, Fargo, N. D.; Al Krebs Brokerage, Merrian, Kansas; F. Wierenfeldt, Minneapolis, Minn.; Lawrence-Turville, Hutchinson, Kansas; Arizona Cigar & Tobacco Co., Tucson, Ariz.; Cook Boynton Co., Los Angeles, Calif.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It has come to our attention that a foreign firm has offered for sale in this country cocoa presses which appear to infringe several of our patents on the automatic features of the Carver Cocoa Press. There are also some unfounded and false rumors circulating that we are no longer manufacturing Carver Cocoa Presses.

The validity of Carver Cocoa Press patents is, and has been, for many years recognized and acknowledged throughout the industry in this country and abroad. Carver Cocoa Presses are the only presses on the world market authorized to embody the features covered by Carver patents.

We are still actively engaged in the manufacture and sale of Carver Cocoa Presses in this country and in many countries abroad through our duly authorized licensees, as we have been for the past 45 years.

We wish to give this notice that anyone making, using, or selling presses or press attachments which infringe any Carver patents will be held accountable accordingly at the proper time.

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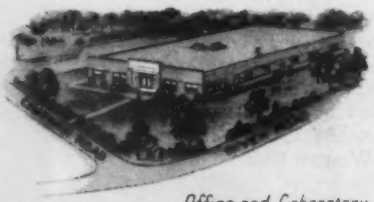

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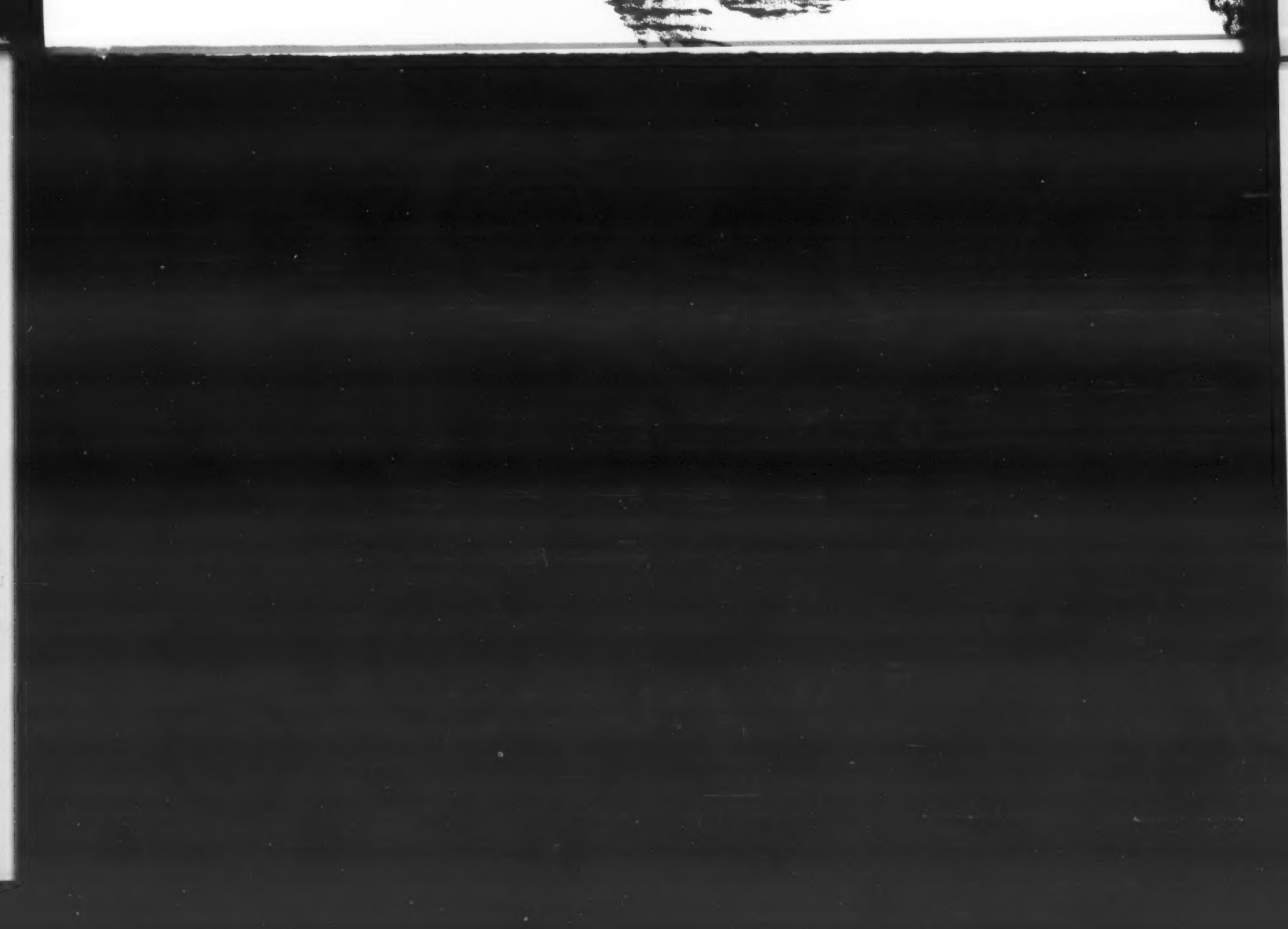

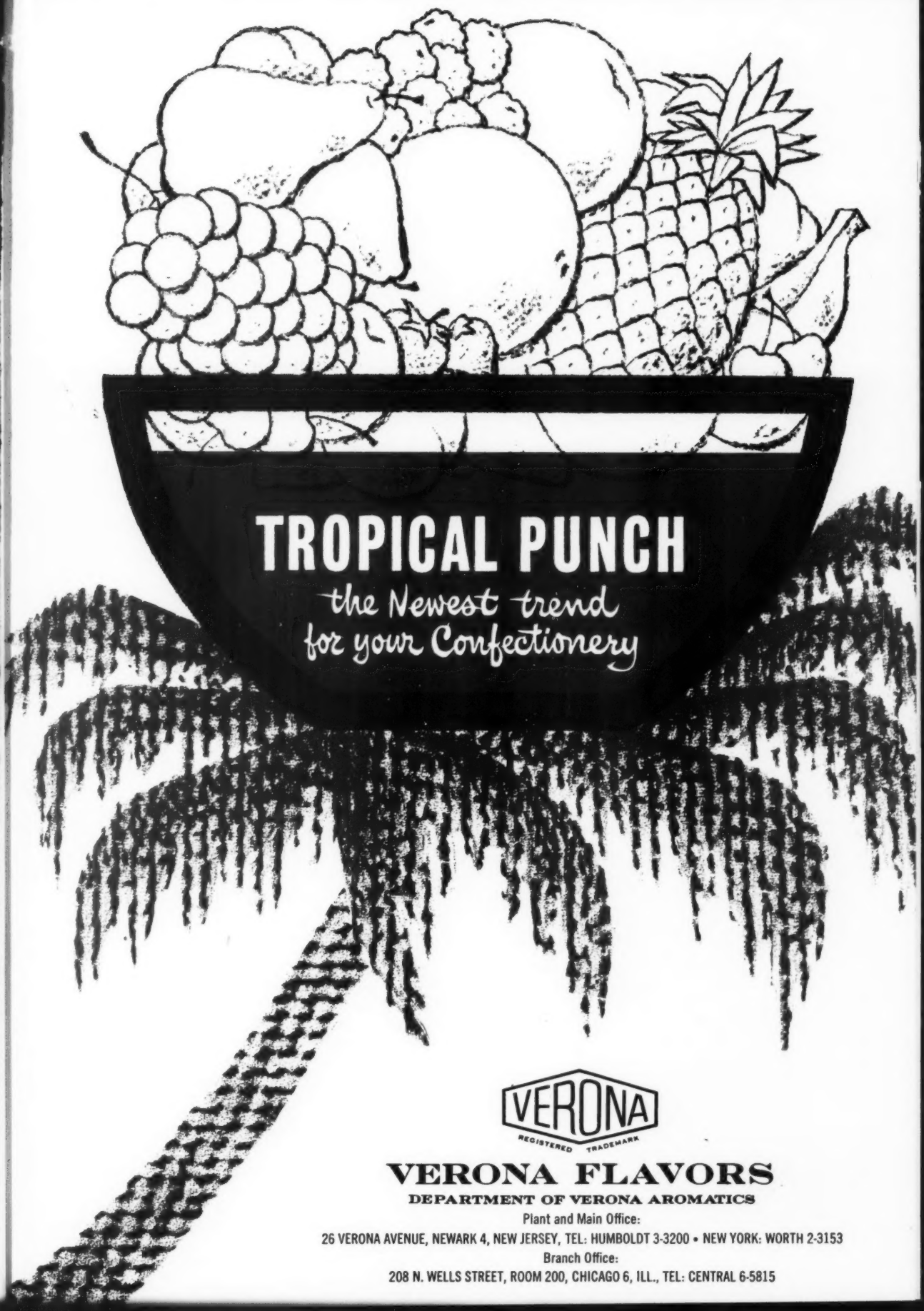

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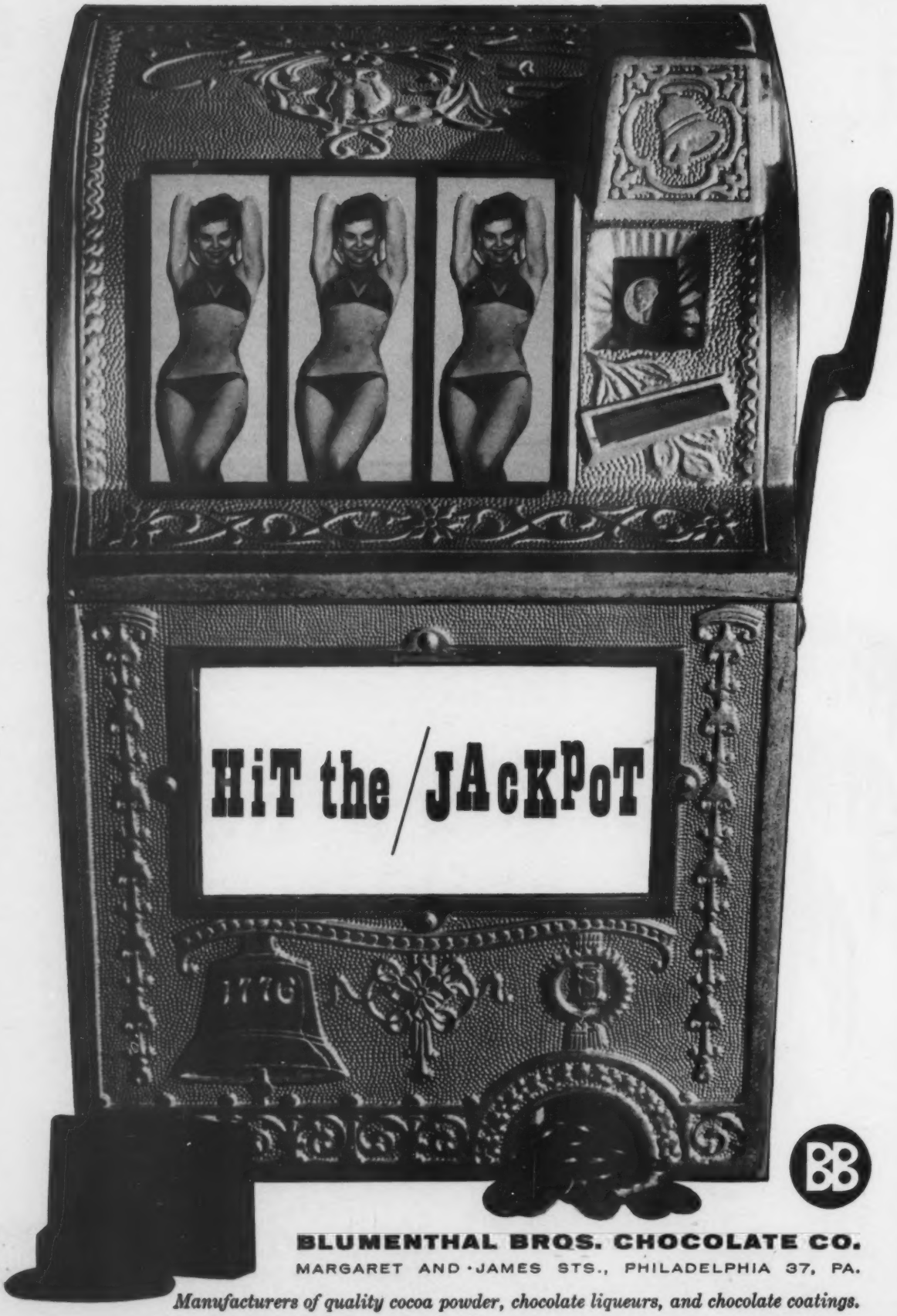

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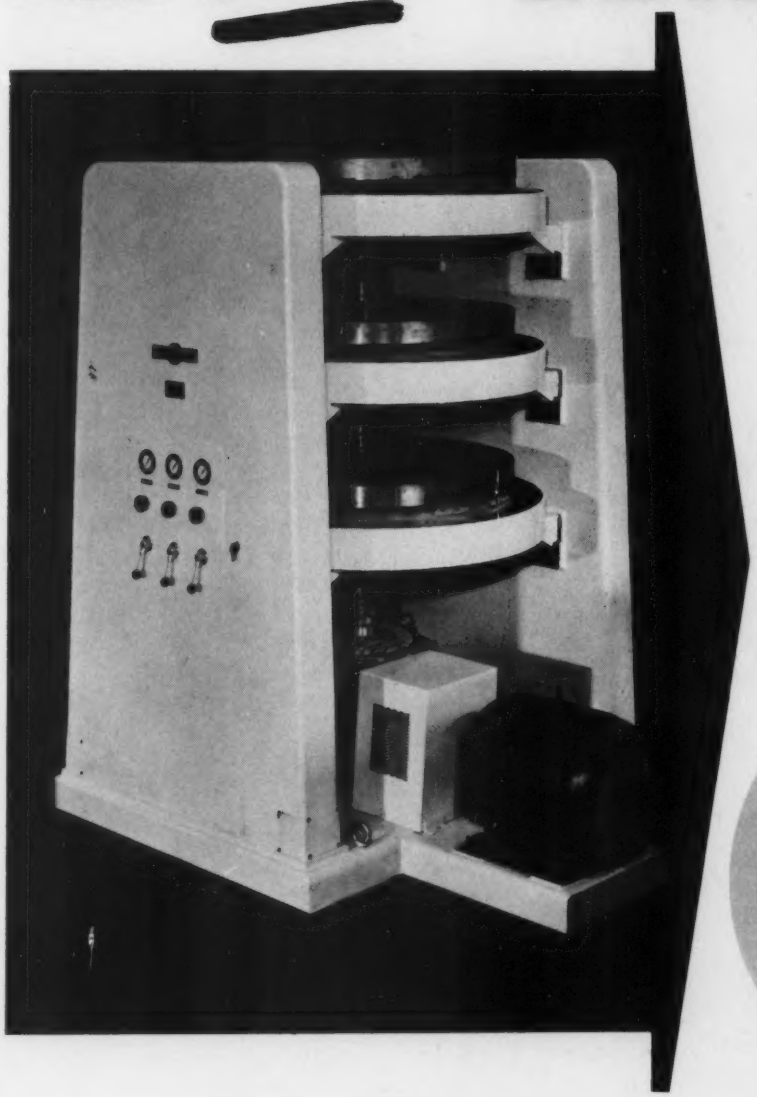

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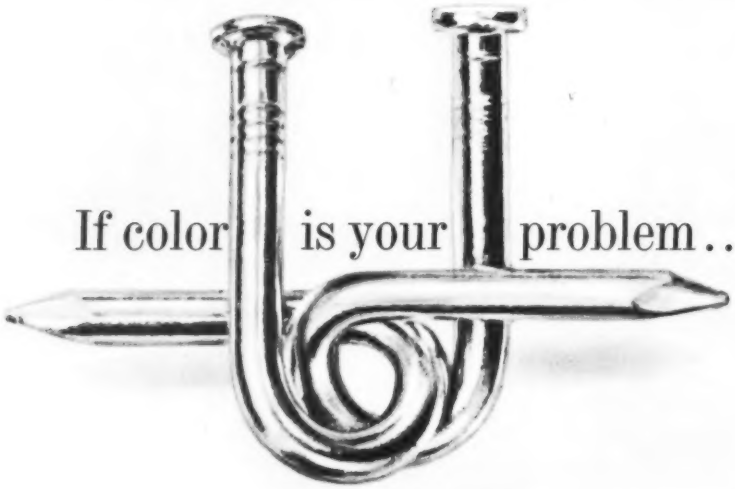

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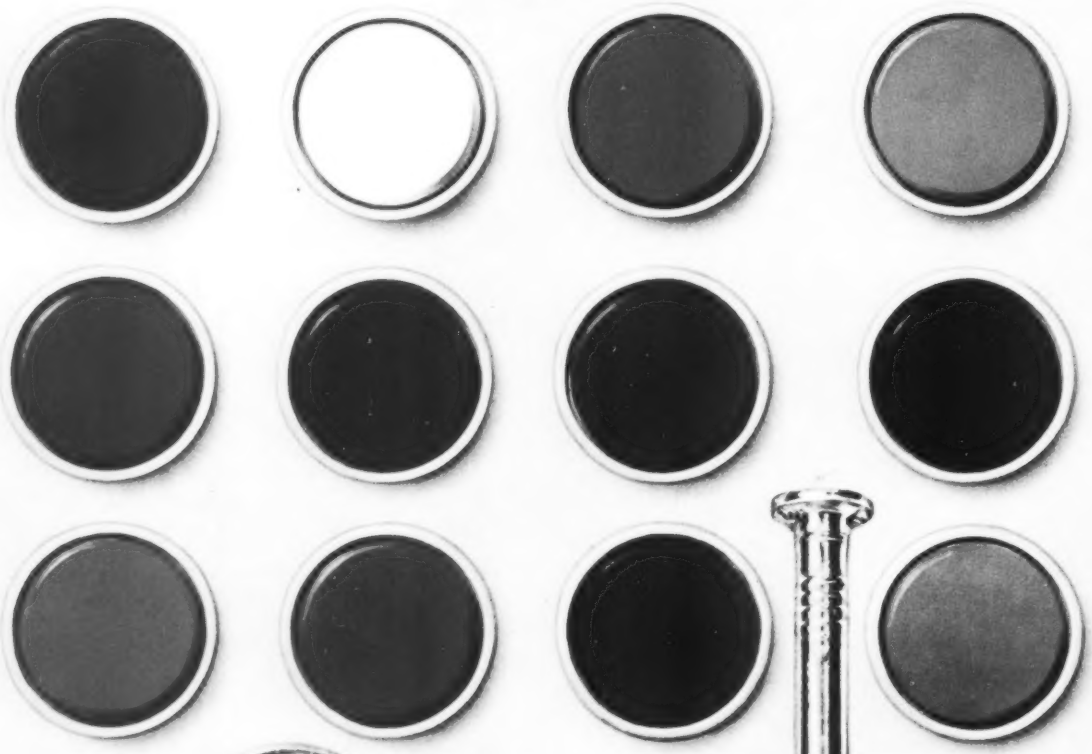

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November, 1960

Volume XL—Number 11

Basic facts for candymakers: fats and oils

By Norman W. Kempf
General Foods Corp.

Fats and oils are chemical compounds which fall under the classification of "Esters", a name given to compounds resulting from the reaction of an alcohol acting as a base, with an acid. This particular classification involves esters which are all composed of a particular alcohol (glycerine) combined with the type of acid which is known as a "fatty" acid.

Fats and oils are produced naturally by both plants and animals, their major function being to act as a storehouse for energy needed for future use. In plants, they are found mainly in the seed, to provide food for the original growth of the new plant. In animals, they are found in the eggs of oviparous animals, and are also found in the tissues of most animals, where they are deposited to provide energy during periods in which the animal is unable to find sufficient food for his immediate needs.

Both animal and vegetable fats and oils have one common denominator, their basic alcohol is glycerine. There is however considerable variation in the nature of the fatty acid found in combination with this glycerine.

Glycerine happens to be a trihydric alcohol, and it is possible for one molecule of glycerine to combine with three molecules of fatty acids. While most naturally occurring fats are triglycerides, i.e. each hydroxyl group in the glycerine molecule is combined with a fatty acid, there are also present in nature glycerides in which only one or two of these hydroxyl groups are tied up, the remaining groups still acting as a normal alcohol. These products are known as mono- and di-glycerides, and can easily be produced synthetically. Because of their nature, being "crosses" between alcohols and fats, they act as emulsifiers, by bringing the two together.

Fats and oils themselves are not miscible or soluble in water, and there is a heavy surface tension between the two when they are contacted. An emulsifier is a compound which can ease this surface tension, and permit the two "antagonistic" surfaces to come together, and form an emulsion, although there is no true solution of one in the other.

The properties of a fat are governed by the nature of the fatty acid combined with the glycerine. The term "fatty acid" is used by chemists to de-

Mr. Norman Kempf, long recognized as one of the leading scientists of the chocolate industry, is beginning, with this article, a series dealing with the basic facts needed to understand the current theory and practice of candymaking. In this connection, one of the real needs of this industry is a more rapid application of research findings to factory operations. The study of this material by candymakers without technical training will be of great assistance to the understanding of research reports, and the evaluation of their adaptability to specific factory operating conditions.

scribe those organic acids in which the carbon atoms are linked together to form a chain, which may contain anywhere from 2 to 20 carbons. The longest chain commonly found in nature is 18 carbons, characteristic of stearic acid. Palmitic acid has 16, myristic 14, lauric 12, and so on down the line.

The melting point (mp) of any fatty acid and correspondingly the fat which may contain it, is influenced by the number of carbon atoms in the chain, increasing as the number increases. There is however, another factor which influences the mp of fats and that is the degree of saturation with hydrogen. Stearic acid is completely saturated, every carbon atom holding at least two hydrogens and melts at 140°F. It is possible however for two carbon atoms in the chain to be linked together with a double "bond", in which case these two carbons only hold one hydrogen atom each. This phenomenon occurs in oleic acid, which has 18 carbons, but two less hydrogen atoms than stearic, and is an oil at room temperature instead of a solid as is stearic. If oleic is combined with hydrogen, it is converted to stearic. This is known as "hydrogenation".

Nature has evolved a third way of controlling melting point, and that is a combination of the two above. The major fat in cocoa butter 2-oleopalmito-stearin is an example. In this case the glycerine molecule holds three different fatty acids, each of different melting point, all within the same molecule, and the mp of the combination is somewhere between the top of stearic and the bottom of oleic.

However, if equal quantities of tristearin, tripalmitin, and triolein are physically mixed together, the fat mixture behaves differently from cocoa butter. Such a mixture would have a wide range of melting points, like a shortening, instead of a relatively sharp melting point of the 2-oleopalmito-stearin. In evaluating a fat it is important to know whether the constituent fatty acids are in chemical combination, or simply mixed together.

In order to freeze or crystallize any pure substance from its liquid state, heat must be removed from it. As long as the liquid is at temperatures above its "melting point", removal of heat lowers the temperature. However, when the temperature reaches the melting point, a phase change begins to take place, and the liquid is changed to a solid, generally in the form of crystals. At this point, further removal of heat merely causes more of the change of state, without any further lowering of temperature, until all of the liquid has been changed to solid, after which the temperature of the solid can be lowered. The heat units involved in this change of state are known as the "latent heat of fusion" of the substance. With most pure substances, cooling below the melting point without change of state is very difficult.

However, in the case of fats, especially those which are mixtures of various glycerides, it is possible to "supercool" the liquid, below its melting point, as the influence of one fat on another, introduces a time factor in the formation of crystals, and the liquid can be lowered in temperature without complete change in physical state, because of the time needed to form crystals. Because this is possible, another important property of fats comes into play, namely, their ability to crystallize in 3 or 4 different crystal systems, each having its own particular melting point, latent heat of fusion, and degree of contraction when the change of state takes place.

Actually only one of these crystal forms is stable, the others being temporary forms which will eventually change over to the stable form. It is therefore possible to cool a liquid fat so rapidly that the temperature of the liquid is brought down to a point below the melting point of the unstable crystal forms, and these begin to crystallize before all of the stable types have had time to form.

Such a mixture of crystals can be quite solid, as long as the temperature remains below the melting point of the unstable forms, but in time, the unstable forms which have lower melting points revert to the most stable form with its higher melting point. When this occurs, there is a change in the size and shape of the crystals, accompanied by a release of latent heat at the point of change. Both actions can cause serious changes in the texture of the fat.

In the case of one fat, cocoa butter, which has been thoroughly studied, Vaeck has published the following physical constants, which give a general picture of the situation in such a mixed fat.

Crystal Form	Melting Point	Latent Heat	Contraction
β	34-35 C.	36 cal per gram	0.097 ml/gram
β'	27-29 C.	28 cal per gram	0.080 ml/gram
α	21-24 C.	19 cal per gram	0.060 ml/gram
γ	16-18 C.	.....	.....

These figures explain why cocoa butter must be "tempered" before it is frozen or crystallized. Steps must be taken to prevent the formation of the unstable crystal forms, or it will be impossible to remove all of the latent heat of fusion at the time of freezing the fat.

The tempering process may be carried out in several ways. The objective is to introduce in the melted fat, "seed" crystals of the most stable form, to form a pattern on which the balance of the fat can crystallize. At the same time the formation of any seed composed of unstable types must be avoided. Seed nuclei are generally first formed on the metal surface of the vessel in which the liquid fat is confined, and heat is removed by cooling this surface. If this surface is kept at a temperature between the melting points of the most stable form, and those of the less stable forms, only stable seed nuclei will form. This method of tempering requires time, as this surface temperature is only slightly below the liquid temperature, and the cooling rate will be slow. If the time factor is an impediment to production rates, more rapid cooling can be employed by using a more drastic temperature differential between the metal and the liquid. This is likely to introduce unstable seeds in the melt, so steps must be taken to destroy them before actual freezing takes place. This can be done by reheating the melt to a point

above the melting point of the highest melting unstable type, to melt down these undesired seeds without destroying the wanted seeds of the stable type. The melt can now be safely frozen, bearing in mind that as long as there is liquid fat on the surface, drastic temperature differentials must be avoided, but as soon as the surface is frozen in stable form, heat can be removed more rapidly.

Rancidity of fats

Fats are subject to two kinds of rancidity, oxidative, and hydrolitic. "Unsaturated" fats, containing in part such fatty acids as oleic or linoleic, can be oxidized, by reaction of the double bond with oxygen. The resulting compounds possess an unpleasant taste, and may be toxic. This type of rancidity can be prevented or delayed by the use of substances known as antioxidants, which protect the fat by themselves absorbing any oxygen which comes in contact with it. Certain metallic salts, especially those of copper and iron act as catalysts to speed up the oxidation reaction, so should be avoided wherever possible.

The second type is caused by a reaction between the fat and water, known as hydrolysis, which splits up the fat into glycerine and the fatty acids of which it is composed. Hydrolytic rancidity is particularly objectionable if there are any fatty acids present which have short chains of carbon atoms. Free fatty acids with less than 14 carbon atoms possess an unpleasant flavor, and odor. Those with longer chains are less soluble in water, and therefore are not as easily detected by taste. As little as 0.125% of free lauric acid in a fat contributes a "soapy" taste to the product, and certain fatty acids with shorter chains can be detected at even lower levels. As this type of rancidity is speeded up by certain organic catalysts, precautions must be taken to avoid the presence of these products. The most dangerous are those enzymes which are "lipolitic", which can cause hydrolysis even when present in very tiny amounts.

As the two types of rancidity are different in nature, steps taken to retard one will not necessarily retard the other, so protection against fat spoilage requires careful consideration of the conditions to which the fat will be subjected, during storage after manufacture.

The term "melting point" has been used in this article without definition. Of course the meaning of the word is evident, it implies the temperature at which the substance melts. In the case of fats, however, this may not be a precise point. Most pure substances have a precise melting point, at which the solid state is suddenly changed to the liquid. As most fats are mixtures, they behave somewhat differently, having a melting range, rather than a sharp point. The lower melting components of the mixture melt before the others, and soften the mixture, they may even dissolve some of the solids, and put them into actual solution. This results in a gradual melting, with no easily measurable break.

This raises the question, what is the real melting point of the fat, the point at which it softens, or the point at which all components are melted? Variations in technique while determining the melting point, can cause wide differences in the result obtained, and unless the method employed is specified, melting point determinations can be the cause of confusion.

The fats and oils industry commonly uses as a standard an arbitrary and empirical method devised by the late Dr. Harvey W. Wiley, father of the 1906 Pure Food Law. This method gives reproducible results, but does not give a true picture of the melting range of the fat. In recent years scientists have developed a new method, known as "dilatometry", which gives a better picture of the status of such a mixture. This method takes advantage of the fact that fats expand as they melt. By making a measurement of the increase in volume as a solid fat is gradually warmed, an excellent index of the total amount of solids present at each temperature can be obtained during the warming process.

Fats are used by confectioners in a number of different ways. Dairy fat is used chiefly as a flavor, it also imparts a creaminess to a center. Fats are also used as lubricants, especially in caramels, where they improve the eating qualities by reducing the tendency of the center to stick to the teeth, as well as contributing to the standup of the caramel.

They are also used in coatings, to act as the continuous phase. This usage takes advantage of the fact that they provide a seal or moisture barrier, which holds moisture in the center during storage, and at the same time provides a glossy surface to add to the appearance of the candy so coated.

They are also used to control the texture of hard candy, to improve the "bite" of a nut crunch, for example.

Another use is as a release agent, to prevent sticky candies from sticking to slabs or other candy making equipment.

Because of this wide use in candy, an understanding of the nature and properties of fats and oils should be of value to the confectioner in using them to best advantage.

Fats other than cocoa butter used by confectioners fall under three categories.

Animal fats. These fats are generally composed of the glycerides of stearic, palmitic and oleic acids, except in the case of dairy fat which also contains butyric, caproic and capric acids.

Vegetable "shortenings" made by hydrogenating liquid vegetable oils such as cottonseed, peanut, soya, and sesame. Hydrogenation converts part of the unsaturated oils to palmitin and stearin, with higher melting points, and the resulting fat is a mixture of both types, resulting in a plastic mass, consisting of a suspension of solid crystals in a liquid oil.

Hard butters are generally prepared from tropically grown oils, most of which contain a substantial proportion of myristic and lauric acids, with melting points in the middle range. By fractionation, and also by rearrangement of the esters chemically, fats can be made which have rather sharp melting ranges, and are suitable for use as hard butters.

Current enigmas of chocolate tempering

By J. Koch

The general understanding of what happens in a chocolate when it becomes "tempered" has been enormously improved over the last ten years or so, thanks to the intensive work done on the subject by quite a large number of industrious and capable research workers on both sides of the Atlantic. The more one studies almost any natural phenomenon, however, the more one discovers how little one really knows about it, and how much more there is still to be learnt. At the present stage of development, for instance, it is obviously difficult for a factory man to discern which of the current research findings are immediately applicable to his particular problems and which of them may only be of secondary importance in his case. Circumstances differ from place to place, and it is necessary to remember that no one method of tempering is likely to be equally applicable in all circumstances. There can also be little doubt that the future will see more unfolding of knowledge than ever before, so there is still a very real need for intelligent judgement when it comes to applying research findings to the solution of any practical problem of chocolate tempering.

It is perhaps simplest to approach the problem from the back end. We know that solidification of fat is a process of crystallisation and that we have got to get it solidified in crystals which are as numerous as possible, as small as possible, and as resistant to subsequent change as is possible. The whole need to temper at all is governed by this question of resistance to subsequent change, or stability, for everything else—snap, gloss, speed of operation etc.—would present no serious difficulties if cocoa butter could be relied upon to set in a stable form under the fast cooling conditions which favour gloss and a fine grained crystalline structure.

Stability is only ensured when all the fat sets in the most stable form, and this can only happen if crystal nuclei of the proper form are established in the masse before it is allowed to solidify, and if the subsequent cooling is applied at such a rate that all crystal growth is concentrated on these nuclei. Any higher rate of cooling will inevitably cause fresh nucleation and crystallisation in an unstable form. The rate of diameter (or length) growth of a crystal is reasonably constant under the temperature conditions realisable in practice, which means that the weight of fat solidifying per minute is extremely small when the crystals are small, as in freshly tempered chocolate, increasing very rapidly as the crystals start to increase in size (approximately, $dW/dt = k \times W^{0.667}$, where W is the weight of fat already solidified at any instant; note that this formula only applies to the

period before "crusting over" of the chocolate, however, subsequent "hardening off" being associated with a decelerating rate of solidification). Space does not permit a detailed study of the mechanics of crystal growth on this occasion, but plenty of information on the subject can be found in almost any textbook on chemical engineering; it offers a complete explanation of why shock cooling has such unfortunate effects on chocolate, also why the surface of a properly tempered chocolate always "crusts over" with such apparent suddenness. When basic data on possible rates of crystal growth is available, it enables one to calculate precisely what number of nuclei are necessary in the tempered chocolate to give any particular final crystal size, also what rate of cooling should be applied at each stage of the solidification process. Even though such data is all but unavailable at the present time, enough is known about the general mechanism of crystal growth to give us a very reasonable picture of how the basic characteristics of a tempering process and a solidification process must be matched up if the two are to give the best possible end result in any particular circumstances. It is perhaps also necessary to include a caution against placing too absolute a trust in the indications given by more or less incomplete theoretical considerations of this sort, however, as there are a great many secondary and not altogether calculable effects which mar the apparent simplicity of the ideally solidified chocolate—for instance, the tendency of superfine crystals to melt at a slightly lower temperature than rather larger ones.

The purpose of the tempering process itself is principally to get crystal nuclei of the right sort established in sufficient number in the chocolate, before final solidification is permitted. This is no easy matter; not only is there the question of how to establish the nuclei, without at the same time getting aggregation or crystal growth (the condition represented by "over-seeding"), but it is also a virtual certainty that nuclei of more than one sort will be required in any ordinary chocolate, the fat of which inevitably contains a mixture of different glycerides. Whilst it is fairly generally acknowledged by practical men that chocolates of different sorts are better suited by different types of tempering operation, there is little agreement as to which type should be used with which sort of chocolate. At present, practice cannot get very much further than to differentiate two principal functions of the tempering process—a) a fractional pre-crystallisation of high melting fractions of the fat and b) a general nucleation in the main body of the fat. The first purpose, generally achieved by long slow stirring at temperatures close to the complete melting point of the fat concerned, is clearly of prime importance for some classes of chocolate, mainly those containing replacement fats of the lauric type. The second purpose, general nucleation in the main body of the fat, appears to be much the more important one in the case of most pure cocoa butter chocolates. It appears to be achieved most effectively by sharp under-cooling in association with intensive stirring, a style of treatment which usually needs to be followed by an additional process—one of re-heating, in which the unstable nuclei produced by under-cooling are successively converted into more stable forms. This leads to an analysis of the typical tempering operation into three main stages—1) A pre-crystallisation of high melting fractions, 2) A nucleation in the main body of the fat, and 3) A re-heating stage. Most successful tempering procedures include all three stages, at least to some degree, but the degree of emphasis given to each stage can be very different for different types of tempering operation.

Whilst it is clearly still impossible to estimate at all accurately what part is played by each of these processes in any actual tempering operation, or exactly how much of each form of treatment is required by any particular type of chocolate, it can still be helpful to look at actual tempering operations with this background in mind, attempting to estimate the relative rates of nucleation achieved in each part of the fat during each part of the processing, integrating them to give the resultant total nucleation prior to solidification, also allowing for the possible effects of crystal growth or crystal aggregation during any stage of the treatment which endures for a long enough period to make this a practical possibility. It also suggests the further possibility of disintegration, or dis-aggregation, of fat crystals which have become prematurely oversize, to be brought about either by heating the chocolate until the oversize crystals start to fall apart as a result of melting, or stirring or homogenizing it until they fall apart as a result of mechanical attrition. Both processes—thermal disintegration and mechanical disintegration—probably play an important part in many actual systems of tempering.

I have already given some indication of the effects to which I attach the most importance in particular cases. Thus, long slow pre-treatment at relatively high temperatures appears to be most important in the case of chocolates based on lauric type fats, containing only small proportions of cocoa butter. I am principally indebted to Mr. Bosschieter, Chief Chemist of Messrs. Crok & Laan, for an explanation as to why this should be so—he points out that it is the long chain high melting glycerides which are fractionally crystallised by this treatment, that it is these glycerides which are for the most part extremely slow to crystallise in the stable form, and that if they are not pre-crystallised, they can gravely disturb the structure of the solidified (or semi-solidified) fat by converting to the stable form, with a concurrent contraction, whilst the chocolate is in store, long after its original manufacture. This argument does not apply to lauric type fats alone—there are some such high melting glycerides present in almost every fat—and it seems very probable that they will be a principal cause of loss of gloss or bloom of the long delayed type.

The observation that pure cocoa butter chocolates are usually best treated by a high speed

type of tempering process with sharp under-cooling is one that I have repeatedly made, applying to all sorts of moulding and coating operations. It is, for instance, the only method I know which will give a large block of chocolate (2" or more thick) fine grain right through. It has been pointed out on a previous occasion that this is a sensitive test for adequate nucleation, the ordinary coarse grained structure of the centre of a large slab being due to enforced slow cooling in the presence of too few nuclei. The principal claims on behalf of a different treatment of cocoa butter chocolates come from the devotees of "drip feed" treatments, in which a feed of warm chocolate becomes permeated with nuclei through mixing with ready tempered chocolate, or in which nucleation is induced by the mixing in of shavings of ready solidified chocolate. These methods work, of course, if conducted by suitably experienced operators, but it is my experience that they always result in a relatively slow setting chocolate, requiring a long time of solidification if over-chilling is to be avoided (as it must be). Analyse such a system in the way indicated above, and it becomes relatively easy to see that a drip feed process should be generally favourable to stage (1), that establishment of new nuclei due to cooling and stirring is likely to be negligible, that there is a marked risk of crystal growth and crystal aggregation if working temperatures are in the least bit low and that the whole process may in fact break down if working temperatures are not high enough to ensure a good degree of disintegration of already existing oversize crystals. I understand that mechanical disintegration of crystals, using fierce stirring, has been found to be undesirable in this case, though one would imagine that it ought to be helpful, if suitably arranged. There are advantages and disadvantages in any particular system of tempering known to practical men as a workable one, however, and one could go on for a very long time summing up the merits and de-merits—practical as well as theoretical—of a vast variety of different styles of tempering process.

One of the more interesting cases is the cocoa butter chocolate in which from 15 to 25 percent of the total fat is replaced by a lauric type fat; it is an exceptionally difficult mixture to temper—the cocoa butter has a very marked tendency to crystallise in an unstable form—and it also bears a marked resemblance to some of the notoriously difficult high milk fat chocolate recipes. The treatment which is the most effective, in my experience, is usually very sharp undercooling combined with very intensive stirring, followed by a prolonged re-heating period at rather moderate temperature (sharp re-heating to the full normal operating temperature is usually out of the question). A very curious feature is the apparently variable effect of a prolonged state (1) treatment on this class of chocolate—on some occasions it appears to be distinctly beneficial, on others it appears to completely spoil the texture (and the contraction, in the case of moulded work) of the resultant chocolate. The explanation of the bad results might well be excessive pre-nucleation, followed by uneven crystal growth and crystal aggregation, not successfully re-dispersed, for the theory of crystal growth indicates that uneven sized pre-crystals, especially if combined with inadequate total nucleation in the tempered chocolate, should result in the maximum irregularity of crystal size in the solidified chocolate, especially if the final cooling is to be conducted reasonably slowly, as it should be. Some further examination of what occurs when one attempts to temper a chocolate which has not been re-melted to a high enough temperature after initial solidification might well provide some additional information on this point, since the two cases should be closely inter-related. Also to be remembered when considering problems of contraction is that it is probably not enough that the fat alone should contract; it must be able to draw the particles of cocoa, sugar and milk with it if there is to be an adequate dimensional change in the piece of chocolate as a whole. This brings in textural considerations of a much more far reaching nature than mere tempering and cooling, to which the scientists have as yet contributed little.

Whilst this account of current problems of tempering and solidification falls short of a complete explanation of how to get round every difficulty, by a very long way, I hope at least that it will be of some help to people who have to assess the merits and demerits of particular systems of tempering when applied to particular types of chocolate. I suggest that it is always advisable to consider any tempering operation as comprising the three stages described, even if one or more stages may be all but omitted in particular styles of tempering; it is also useful to try and classify every chocolate in terms of the proportion of each form of tempering treatment that it requires, remembering that the ultimate purpose is a sufficiency of stable nuclei in the tempered chocolate to avoid any need for fresh nucleation during the cooling process, or any subsequent conversion of unstable fat crystals into stable ones. In passing, and for the sake of completeness, it should be observed that solidfication of 100% of the fat in the stable form may never be practicable—gloss, particularly, may be enhanced by a certain minimum proportion of unstable forms, though it must be best to aim to get it from a very fast setting chocolate, one in which the number of nuclei of the stable form is so large that crusting over occurs rapidly and no individual crystal can grow to an appreciable size. Above all, however, it is essential to appreciate that an ill chosen rate of cooling for the final solidification can enforce fresh nucleation, however well tempered the chocolate, and that cooling must be applied progressively if it is to be applied properly. We may still have a great deal to learn about how best to temper a particular chocolate, but my experience indicates that expensive mistakes more commonly result from poor appreciation of the harmful effect of an unduly harsh cooling system on a reasonably well tempered chocolate, than from failure to get at least reasonable temper in the first place.

Colors and the Export Market

By Cyril L. Hinton

One of the big possibilities of an expanded market for candy today lies in the export field. Many new countries are achieving independence and in others in many parts of the world development is speeding up. Prosperity increases fast under these conditions. Living standards will rise, consumer markets will expand, and increased candy consumption will be a part of this. The forward-looking candy manufacturer may well wish therefore to look into the possibilities of business in new areas.

However, the 1958 amendment to the FD&C Act has made manufacturers very additive-conscious. What is the position in regard to additives in these possible new markets? When the FDA has made its final decisions on the "ins" and "outs", what are the prospects that they will be equally valid elsewhere?

Very probably for the great majority of additives the position as eventually stabilized in the U. S. will be generally acceptable in many other countries. It is likely there will be few cases where a more stringent or skeptical line will be taken than is taken by the FDA on behalf of the American public. Indeed the probability is a greater leniency.

But for colors the position is very different. The difficulties which the exporter will face over colors are, to say the least, decidedly discouraging. For the U. S. itself the acceptability of certain members of this group of additives was, of course, established by administrative action under the FD&C Act long before the 1958 amendment. The evidence had been taken, the pronouncements made, specifications of purity issued, and a short list of harmless coal-tar colors (the FD&C colors)

Comment by Dr. M. B. Sherman, Director of Research, Gold Medal Candy Corporation.

The critical nature of the world color situation is well presented by Mr. Hinton and his conclusions should merit the attention of our national body. It is interesting to note that the FAO/WHO of the United Nations has already recognized the necessity of international action by the formation of a Joint Committee of experts which includes besides Mr. H. E. Stagg, Chief Analyst of Imperial Chemical Industries, England, three of our own representatives: Dr. G. R. Clark, Director of the Division of Cosmetics, Department of Health, Education and Welfare; Dr. P. Johnson, Executive Secretary of the Food Protection Committee of the National Research Council, and A. T. Schramm, National Aniline & Chemical Co.

This Committee has already met twice, once five years ago and again in Rome on November 30 through December 7, 1959. It was at the latter meeting that a recommended list of potential acceptability was drawn up. It consisted of 42 colors, 21 of which were of coal tar origin. These included the 12 which constitute the entire acceptable list of our own FDA, namely Blue 1 & 2, Yellow 5 & 6, Green 1, 2 & 3, Violet 1 and Red 1, 2, 3 & 4.

When West Germany throws out every single coal tar red on the questionable ground that both sides of the molecule should be sulfonated, it is readily seen how necessary is a truly objective research project to distinguish once and for all the hazardous from the harmless. And as Mr. Hinton says, only an international body of scientists with no axes to grind can ever hope to accomplish this. I believe it would be to the interests of our National Confectioners Association to press for such action.

had been in use for years. A few other countries had even copied the list. But a few only. For the most part experts and officialdom in other places have gone their own way. Rival lists have been set up, deemed to include colors more acceptable than the colors of the FDA list. Some of the FDA colors do not appear on these lists. Other colors which do appear on them the FDA does not accept. Presumably they serve the purpose of coloring foods equally well—and are certainly accepted by the health authorities as safe.

The big distinction between colors and other additives stands out clear. Other additives—preservatives for instance, or thickening agents—have a character of universality. They are natural or chemical agents doing a job which is the same everywhere. Generally speaking, there is one additive for one purpose. But colors, as it happens, offer a range of alternatives for practically the same color job. This allows a profoundly national character to creep in, either because of the availability of particular colors from the dyestuffs manufacturers, or because of varying attitudes on harmfulness. These attitudes are self-contradictory. Indeed, if we accept the evidence of the actual colors lists in operation in different countries, we are led to suppose that a color entirely safe in the U. S., for example, may have dire effects elsewhere; while colors passing all safety tests outside the U. S. may make an American sick.

Seriously, however, there are very practical difficulties for the exporter in a situation in which every country claims to have the true and only gospel. To begin with, this means the production of special batches of goods for many outside markets, a handicap as regards costs. Then more trouble may arise if these export batches are for some reason thrown back on the manufacturer—"frustrated exports"—there is no place for them anywhere in home sales. Again it is sometimes difficult to avoid overproduction of an export line. And in any case there are the unavoidable mis-shapes and scrap. All these may amount to sheer waste if the goods cannot be sold off on the home market or worked as scrap into home lines.

The hardest kick of all comes when wires get crossed in the factory, and an export color gets into a home line or vice versa. Quite probably this already occurs more often than is always known. It just happens that the mistakes are not found out. But with increasing vigilance of the control authorities everywhere—and, note it, the newer methods of color identification make the job far easier—goods containing unauthorized colors will more frequently be spotted, with the unpleasant consequences of seizure, return shipments or even destruction. The risk of mistakes obviously increases with every extra color required to enter a foreign market. And the increase of risk is not merely an arithmetic one, be it noted, but factorial (a 1% risk with one outside color becomes a 3% risk with two, a 6% with three, and so on).

With all these hazards, can the would-be exporter be blamed for hesitating? Add up the cost of all the difficulties, and calculate what it amounts to in terms of increased consumer prices and consequently lessened marketing potentiality.

How many of these colors outside the FDA list are there to reckon with? The answer is surprising. Taking most of the countries which have gone in for color control, and assuming that all the colors they allow will be wanted, the number adds up to about seventy! Admittedly, many of these colors are virtually obsolete and remain on the lists from plain administrative inertia. On the other hand many of them, the newer ones, have been given a clean bill of safety after stringent testing. They are there to stay. It might even be claimed that their non-appearance on the FDA list puts this quite out of date.

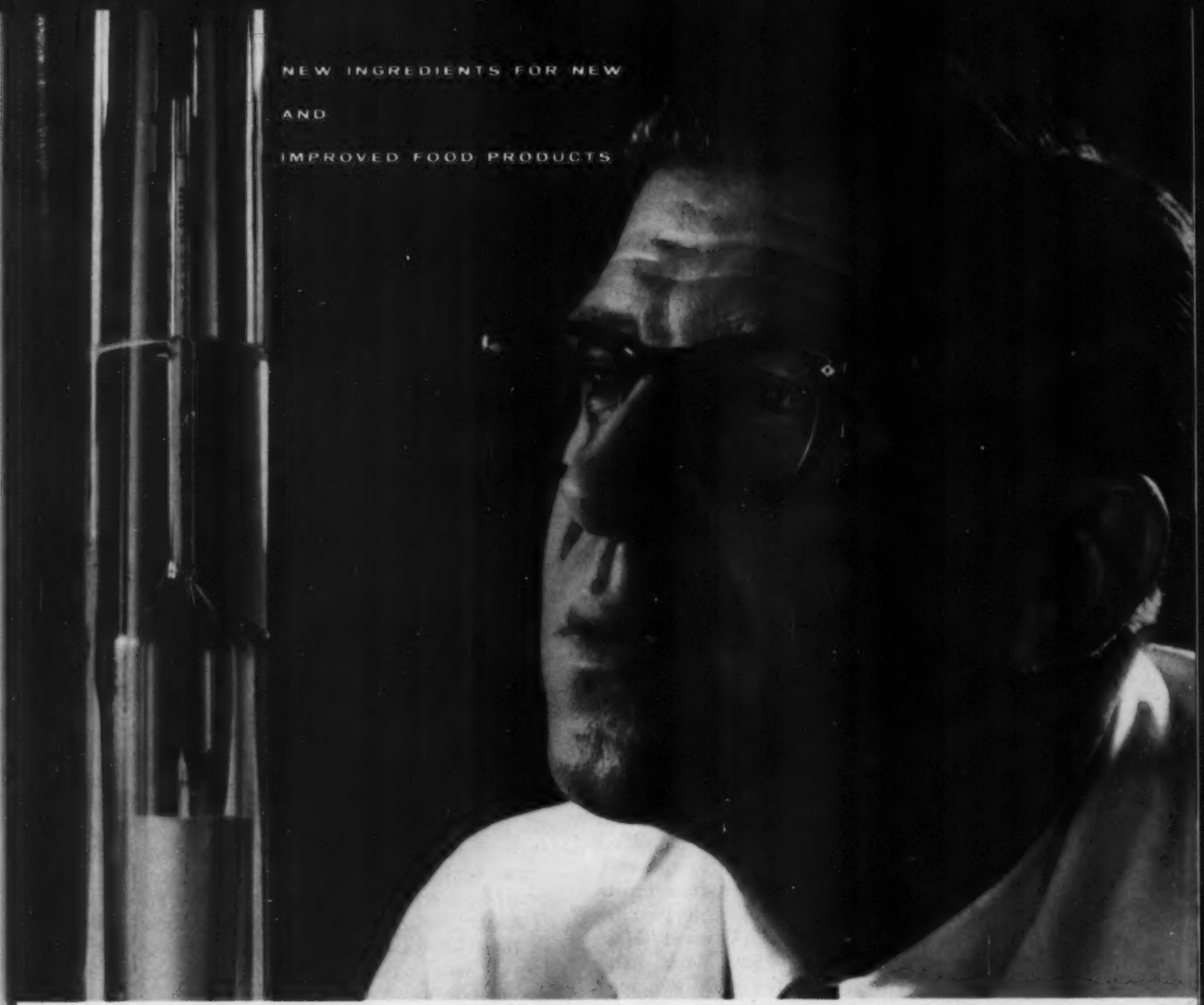
Of all these countries, are there a faithful few which follow the FDA? Canada, of course, and Mexico. Further afield, it seems, Cuba, Peru, Greece and Japan are countries which might be described as coming within the U. S. orbit. Some of the FDA colors (FD&C Red No. 2, Red No. 3, Yellow No. 5, Yellow No. 6, Blue No. 2) are almost universally accepted (though recently the first of these, Red No. 2, has been thrown out by two important countries, India and West Germany). But others, particularly the three FD&C greens, Red No. 1, and Violet No. 1, are in general unpopular.

Indeed, the authorities in many countries seem to have developed some pet color hates. Almost every color ever used in food seems to have aroused a sinister prejudice on the part of some country or other, judging by the omissions from the various permitted lists. A manufacturer preparing to enter the South American market, for example, might think it would be all plain sailing. It would not. The South American health departments are nothing if not isolationist in their views on colors. They might be waging a trade war with their colors nailed (or not nailed) to the mast. The innocent candy man calculating that he could get by with a short range of colors satisfying all ten South American republics would find the list very short indeed. Of some twenty odd colors listed by these countries, all but two are unacceptable to one or other of them. Production of separate export lines for each of the ten countries does not make an attractive proposition.

Further afield, confusion becomes worse. Thirty or forty official color lists are in operation in various countries of the world, all different. No single color is on all of them.

Could not some agreement then be reached by governments on a commonly accepted list? At least in certain areas with common trade interests? The possibility of such agreement is, on the evidence, ludicrous. Consider some of the evidence. Take the six Australian States; although for some years past they have been busy "modernizing" their color lists, they still do not see fully eye to eye. A color entirely safe in one State apparently becomes a hazard in another.

Or take the recent extraordinary happenings in Europe in the six Common Market countries. In preparation for the boost in trade these countries began some years ago to move towards a common



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color list. The basis of this effort was a list formulated at a meeting of experts at Bad Godesberg in 1954 to discuss problems connected with the prevention of cancer. The meeting was almost entirely confined to medical people and color manufacturers, with a few administrative personnel thrown in—one participant only had any direct connection with food manufacture. This ill-balanced assembly agreed on a list of 14 synthetic colors which in the present state of knowledge could be considered harmless. At subsequent meetings culminating at Ascona in 1957 the number was extended to 16.

Since then all the Common Market countries have either revised their color lists or introduced one for the first time. Do they agree with the Ascona list? They do not. Not a single one. Nor do they agree with each other. The scheme fell to pieces finally last Christmas when Western Germany, which had seemed likely to be the only country to go all the way on Ascona, threw out six of the seven red colors. Only one (not an FD&C color) was left in for general use. German candy manufacturers are already thinking of cutting color out of candy altogether and relying on the wraps. How all this can help the boost in trade for which the world is crying is anyone's guess. The point at the moment is the virtual impossibility of countries even with close common interests reaching agreement even by way of compromise.

Supposing these Common Market countries had achieved agreement, how would their position have stood in relation to the rest of Europe and, say, the U.S.A.? Only three of the Ascona colors would pass throughout the rest of Western Europe; only five are on the FDA list. If the Common Market failed to agree after five years, how many years will it take for the rest of the world to agree?

To bring the argument nearer home, can it be visualized that the FDA would change its list to fit in with an enlarged consumer market? The late Charles Wesley Dunn, President of the Food Law Institute, at a London conference on food additives control some years back, was asked more or less this question. His reply, in a delightful "what we have we hold" manner, suggested that other people's colors were not the U.S.A.'s baby—the FDA colors had been proved safe and as far as the U. S. was concerned no others came into the picture. Unfortunately for this attitude a number of FDA colors were soon afterwards dropped. But there has been no sign of any new ones—say the Ascona colors—being put on the list.

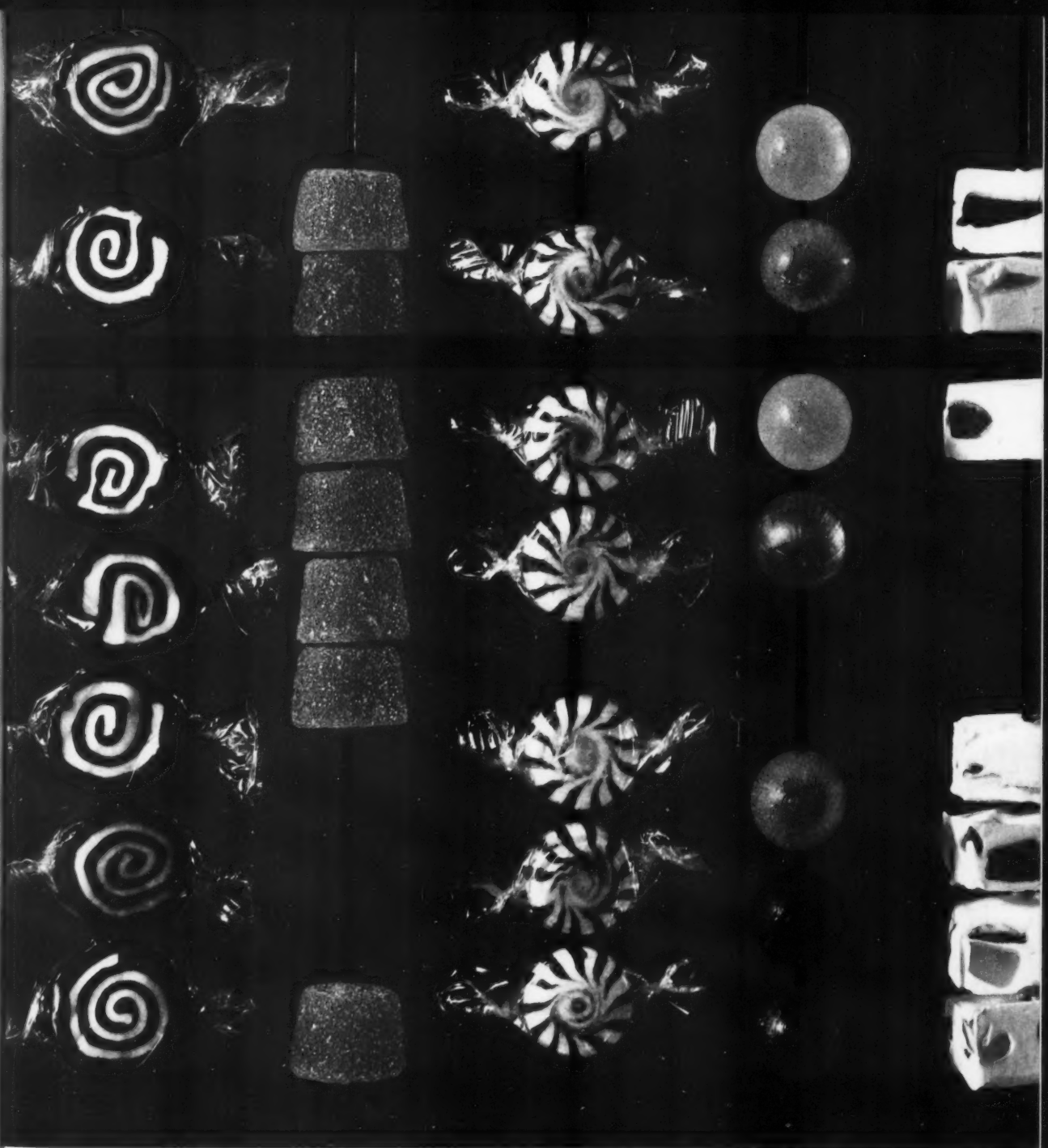
So here is the problem, fair and square: how to reach agreement between governments who will have no agreement—or at least will only creep towards it so reluctantly that progress over the years appears to be backwards. Meanwhile, the new countries (good markets, many of them) are coming along at the rate of several per annum. Shortly they too will begin to produce their color lists. The probability is that each will be unique. The colors list today is like the flag; a proud symbol of a country's independence.

Is there a solution to the problem? There is. The problem can be solved, can *only* be solved within a foreseeable time, by lifting it right above the plane of small-town prejudice on to a world level, the level of the United Nations. The only answer that makes sense, in fact, in a rapidly shrinking world is the formulation of a World Color List.

The United Nations already have the organizations with the weight and authority to carry out this job. The World Health Organization, to safeguard health aspects in the international field; the Food and Agriculture Organization, concerned to see that the best interests of world trade and economy are properly served. These two bodies have in fact already laid the groundwork of a world approach to the problem. Their Joint Expert Committee on Food Additives has reported on a preliminary survey of the subject of additives in general and food colors in particular. They are as yet uncommitted on any final conclusions of detail. But it is the detail, the practical embodiment of the principles in a world list, that is so urgently required.

The FAO/WHO organizations are in an extremely favorable position to proceed to a solution of the problem in a rational, unbiased and definitive way. They can call upon all available information and evidence from governmental and other sources. Non-governmental organizations interested in the field, associations of manufacturers for instance, can be brought into the picture. On their expert committees they can assemble those same leading authorities on pharmacology and toxicology on whose work and views the present conflicting lists have been based. Let these bodies—or their Joint Committee—be asked to provide the world's food industries without delay with a safe and comprehensive list of colors.

The expert committees necessary for the job will be composed of individuals appointed in their own right as authorities on their subject, with an entirely neutral assignment. As international experts they will not be hampered by any necessity for saving bureaucratic face or bolstering up national prestige. Without pre-established positions to maintain against the evidence, they can meet to examine the problems solely on the basis of scientific fact. Clearly there will be differences of view. But if these are not amenable to discussion round the table, they can be resolved by collaborative study and experiment under effectively controlled and agreed conditions. The same can be done with gaps in knowledge which require to be filled, and with the working out of purity specifications, analytical tests and tolerances. The burden of a cost can be equitably shared and the work distributed, for the research resources of the world will be available. Lack of properly co-ordinated experiment must account for many of the inconsistencies which afflict the present situation. Administrative decisions have been taken on the basis of scientific views which have found acceptance in some quarters while they have been re-



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by Stroud Jordan and Katheryn E. Langwill

This volume, first published in 1946, is still the only published reference work on the subject of confectionery analysis. It concerns itself with applicable data that covers composition of basic raw materials as well as that of the finished confections in which they have been employed.
116 pp. – $6.00

Confectionery Problems
(Confectionery Studies, Number 1)
by Stroud Jordan

Stroud Jordan's reputation as an important candy technologist is based on this his first book. Published in 1930 it is still, in many areas, the final word on technology in the industry. Jordan's sense of responsibility to record his discoveries and knowledge for the benefit of the industry caused him to produce more writings on the technical and scientific aspects of candymaking than any other person in the field. The recognition given him in the form of the establishment of the Stroud Jordan Medal by the American Association of Candy Technologists rests on this sense of responsibility.
347 pp. – $6.00

A Textbook on Candy Making
by Alfred E. Leighton

Here is a textbook where the reader can learn the basic fundamentals of candy making, the "how" and "why" of the various operations in non-technical terms. Particular attention is given to the function of raw materials, and why each is included in a formula.
175 pp. – $6.00

Choice Confections
by Walter Richmond

This book, now in its second printing, is written primarily for the manufacturing retailer. It contains 365 formulas given in two batch sizes, one for hand work and one for machine work. All of these formulas have been production tested and have proven to be of great help to manufacturing retailers in varying old items and developing new ones. The book also contains a glossary of candy terms and chemical terms, a complete chapter on chocolate coating methods and a chapter on ingredients and their uses. It is an important and useful book for all manufacturing retailers.
544 pp. – $10.00

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jected in others. A color cannot be safe for human consumption in one country and dangerous in another. The facts must be established and the confusion resolved.

What kind of a list of colors might conceivably emerge from an approach on these lines? As a first guess we might assume it would include those colors which have in the past few years stood up to severe pharmacological scrutiny, given the state of knowledge as at present. These would be, shall we say:

1. the colors now classified FD&C by the Food and Drug Administration;
(2) the colors approved by the Ascona conference;
(3) the colors given an "A" pharmacological classification by the British Food Standards Committee.

There is some overlapping between these sources, but allowing for this we are left with a list of some 28 colors. Doubtless a few of these might not survive an effective world scrutiny. But a few others might be expected to take their place; such as the yellow color which is acceptable to Germany though not on the Ascona list, and perhaps some in the British "B" classification.

However whatever world list might be evolved and although the United Nations bodies have no power to do anything but make recommendations, a list arrived at in the manner suggested would undoubtedly carry immense weight everywhere. Newly independent countries would welcome it as ready-made for immediate adoption. Those countries already having permitted color lists would have paramount scientific grounds for moving towards it in their revisions.

The more a country is concerned with opening up its export trade the more is the scientific argument for a world color list reinforced by the economic one. Exporters will know exactly how they stand on the colors they can use. Export prices will be lowered by the absence of wastage from surplus and scrap, and because of easier supervision in production. Even the burden of the control authorities will be lightened with a restricted number of colors to check on!

Since export markets are going to make an increasing appeal to the U. S. candy manufacturer, it should be the urgent task of the industry to press for an immediate opening out of the United Nations approach to the problem of colors in the largest possible way. The industry can, through the medium of the National Confectioners' Association, urge the government to request that the attention of FAO/WHO be focused sharply on the task of providing the food industry with a universally acceptable list of harmless colors. And through its membership in the International Association of Confectionery Manufacturers the NCA can also ask this body to bring the question directly before the FAO/WHO organizations, thereby securing a double approach along independent channels. The need is plain. The freeing of candy and any other food from its most stultifying and indefensible restriction is the goal.

Candy Clinic

The Candy Clinic is conducted by one of the most experienced superintendents in the candy industry. Some samples represent a bona-fide purchase in the retail market. Other samples have been submitted by manufacturers desiring this impartial criticism of their candies, thus availing themselves of this valuable service to our subscribers. Any one of these samples may be yours. This series of frank criticisms on well-known branded candies, together with the practical "prescriptions" of our clinical expert, are exclusive features of The MANUFACTURING CONFECTIONER.

Panned Goods; 1¢ and 2¢ Pieces

Code 11A60
Bubble Gum—1¢

(Purchased in a variety store, Chicago, Ill.)

Wrapper: Wax paper wrapper printed in red, white and blue.
Gum:
Color: Good
Texture: Good
Flavor: Fair
Bubbles: Good
Remarks: A very good bubble gum for bubbles, but lacked flavor.

Code 11B60
Roll of Sugar Mints—1¢

(Purchased in a chain variety store, Chicago, Ill.)

Appearance of Package: Good
Wrapper: Mints are wrapped in foil, paper band printed in red, green and white.
Mints:
Color: Good
Texture: Good
Flavor: Poor
Remarks: We cannot expect too much for a 1¢ piece of this type.

Code 11G60
Chocolate Coins—1¢

(Purchased in a chain variety store, Brooklyn, N. Y.)

Piece: Piece is the size of a 25¢ piece. Gold foil wrapper.
Chocolate: Good
Remarks: A good eating 1¢ piece.

Code 11H60
Assorted Pastels
10 ozs.—35¢

(Purchased in a chain drug store, Chicago, Ill.)

Appearance of Package: Good
Container: Folding window box printed in green, white and brown.
Colors: Good
Panning: Good
Finish: Good
Jacket: Thin: Good
Center: Licorice:
Color: Good
Texture: Good
Licorice Flavor: Good
Remarks: A good eating licorice pastel; one of the best we have examined this year.

Code 11I60
Assorted Sugar Wafers
7 ozs.—25¢

(Purchased in a chain drug store, Chicago, Ill.)

Appearance of Package: Good
Container: Cellulose bag printed in red, white.
Piece: Piece is a small sugar wafer.
Colors: Good
Texture: Good
Flavors: See remarks.
Remarks: Flavors are not strong enough. Suggest again as much flavor be used. A piece of this type should have a good strong flavor.

Code 11J60
Hard Candy Root Beer Cuts
6¾ ozs.—21¢

(Purchased in a chain drug store, Chicago, Ill.)

Appearance of Package: Fair
Container: Polyethylene bag printed in black and gray.
Cuts: Cuts are wrapped in cellulose.
Color: Good
Molding: Good
Texture: Good
Flavor: Poor
Remarks: Suggest a better root beer flavor be used. Suggest printing on bag be more colorful to improve appearance.

Code 11F60
Peppermint Gum—1¢

(Purchased in a variety store, Chicago, Ill.)

Container: Folding box printed in blue, yellow and red and white.
Gum:
Panning: Good
Finish: Good
Texture: Good
Flavor: Good
Remarks: The best 1¢ gum piece on the market.

Candy Clinic Schedule For the Year

JANUARY—Holiday Packages; Hard Candies
FEBRUARY—Chewy Candies; Caramels; Brittles
MARCH—Assorted Chocolates up to $1.15
APRIL—$1.20 and up Chocolates; Chocolate Bars
MAY—Easter Candies; Cordial Cherries
JUNE—Marshmallows; Fudge
AUGUST—Summer Candies
SEPTEMBER—Uncoated & Summer Coated Bars
OCTOBER—Salted Nuts; Gums & Jellies
NOVEMBER—Panned Goods; 1¢ and 2¢ Pieces
DECEMBER—Best Packages and Items of Each Type Considered During the Year.

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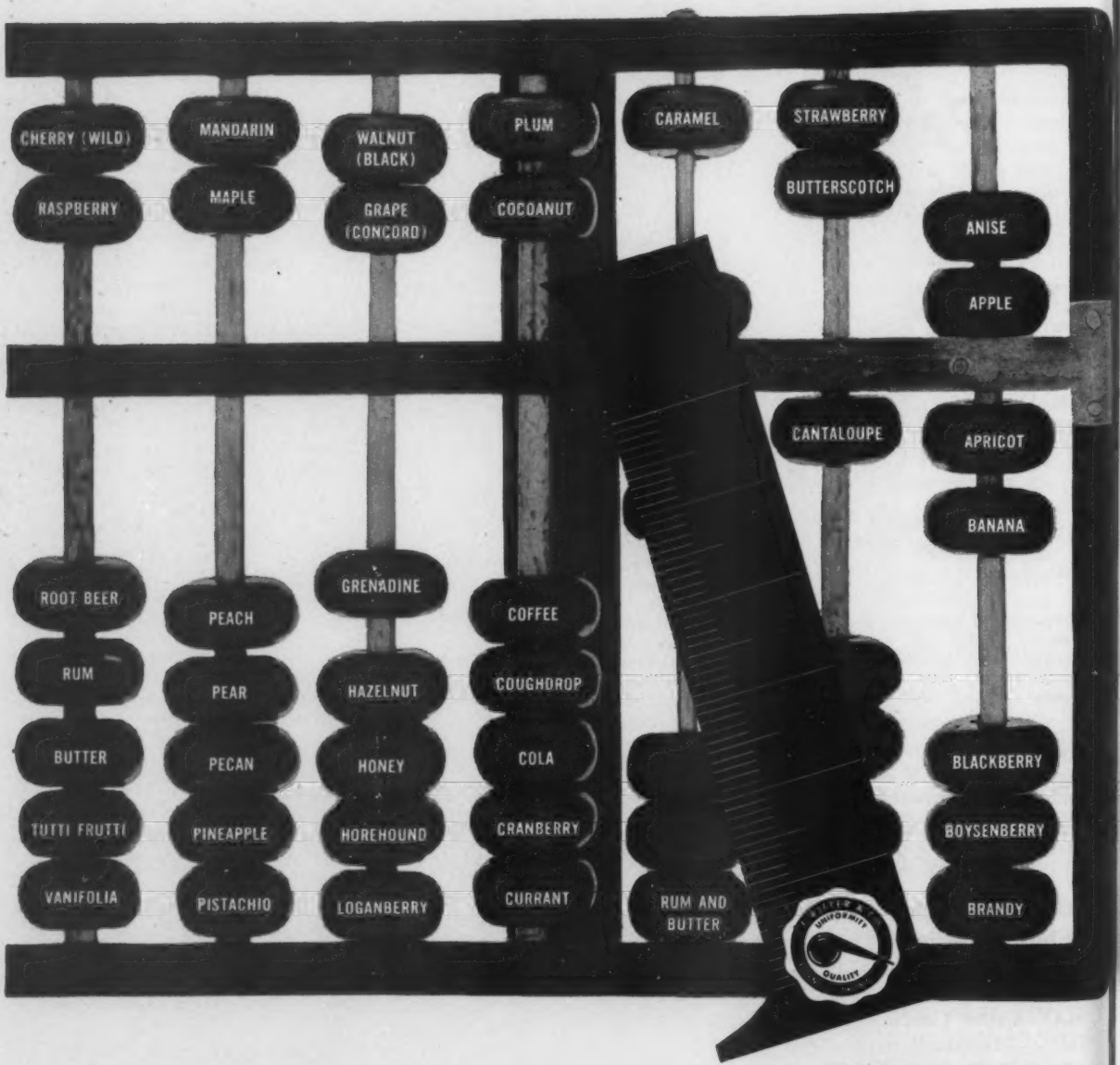

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RITTER INTERNATIONAL
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Branches throughout the world.

Code 11E60
Caramel Roll—2¢

(Purchased in a variety store, Chicago, Ill.)

Wrapper: Glassine wrapper printed in red.
Piece: Piece is a nut caramel stick, coated.
Coating: Good
Texture: Good
Taste: Good
Remarks: A good eating 1¢ piece.

Code 11S60
Miniature Mix
8½ ozs.—43¢

(Purchased in a chain drug store, Chicago, Ill).

Appearance of Package: Good
Container: Folding oblong box, one layer type. Foil wrapper printed in red, silver, blue, white and brown.
Panned Chocolate Pieces:
Centers:
Chocolate Fudge: Good
Peanuts: Good
Mint Creams: Good
Cashew Nuts: Good
Raisins: Good
Chewey Taffy: Good
Caramel: Good
Almonds: Good
Panning: Very Good
Finish: Good
Flavors: Good
Remarks: The best panned pieces of this type we have examined in this price field.

Code 11K60
Malted Milk Balls
¾ oz.—5¢

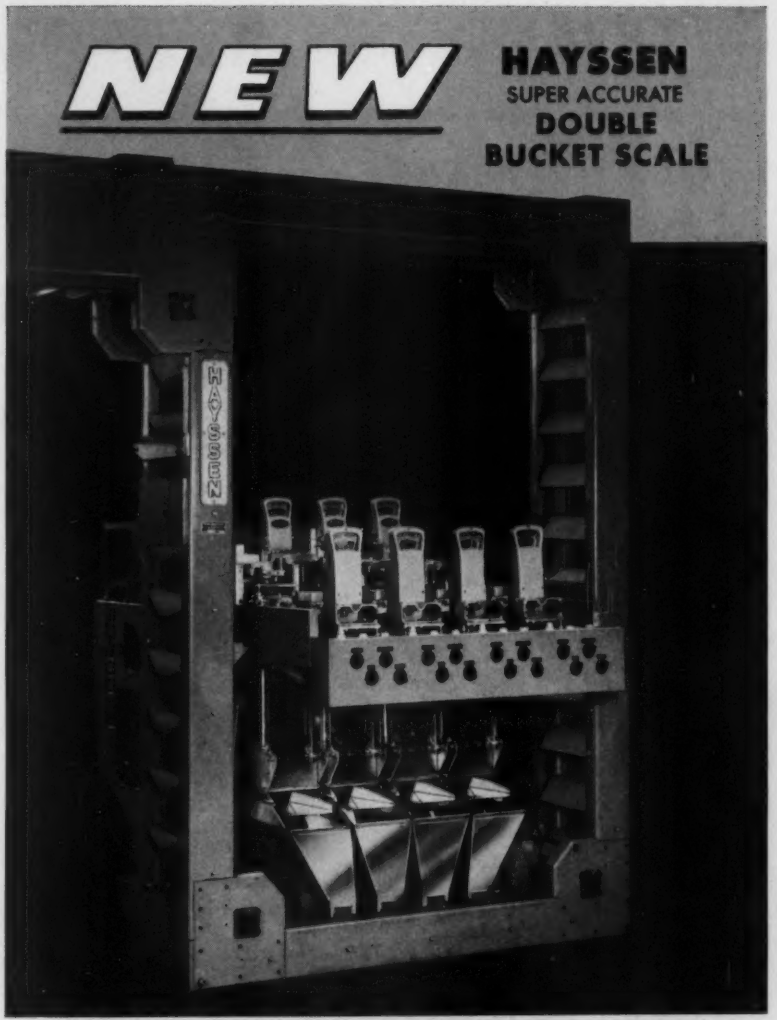
(Purchased in a chain drug store, Chicago, Ill.)

Appearance of Package: Good for a 5¢ seller.
Container: White oblong folding window box printed in red and brown. Imprint of balls in color.
Balls:
Coating: Good
Panning: Good
Finish: Good
Malted Milk Taste: Good
Remarks: A good eating piece; should be a good 5¢ seller.

Code 11L60
Caramel Roll—1¢

(Purchased in a variety store, Chicago, Ill.)

Appearance of Piece: Good
Wrapper: Printed wax paper wrapper printed in brown, orange and white.
Roll:
Color: Good
Texture: Good
Taste: Good
Remarks: We think this is one of the best 1¢ pieces on the market.



Above: Hayssen Double Bucket Scales attached to Hayssen Elevator for floor level feeding. Scales dump product to elevator buckets for delivery to filling tubes.

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- **ONE-PIECE ACCURACY** — Extended dribble trays, each 30" long, allow one-piece feeding for final weighing. Packages can never be underweight.
- **FULL CYCLE FEEDING** — A full filling cycle is allowed for both bulk charge feeding and dribble feeding, thus allowing accurate weighing at greater speeds.
- **AVAILABLE FOR ALL HAYSSEN COMPAK MACHINES** — The new Double Bucket Scale can be attached to any existing Hayssen Compak Packaging Machine. It is available for both single tube and double tube machines.

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Exchange

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Exchange Brand Orange Oil is distributed in the U.S. by Dodge & Olcott, Inc.; Fritzsche Brothers, Inc.; Ungerer & Co.

Code 11N60
Candy Breath Mints
12 pieces—10¢

(Purchased in a chain variety store, Chicago, Ill.)

Appearance of Package: Good
Size: Small looking
Mints: Mints are hard sugar round discs. Roll shape package, gold foil wrapper printed in red.
Color: Good
Texture: Good
Flavor: Good
Remarks: A good eating piece but highly priced at 10¢.

Code 11C60
Nut Roll—2¢

(Purchased in a chain variety store, Chicago, Ill.)

Piece: Piece has a fudge peanut center and is coated.
Coating: Good
Texture: Good
Taste: Good
Remarks: The best 2¢ bar of this kind on the market that we have examined this year.

Code 11R60
Licorice Candies
½ lb.—85¢

(Purchased in a fancy grocery shop, Chicago, Ill.)

Appearance of Package: Good
Container: Round tin, friction top. Top printed in black and green. Imprint of boy in colors. Cellulose wrapper.
Piece: Piece is a hard candy licorice drop, green cellulose wrapper.
Color: Good
Texture: Good
Licorice Flavor: Good
Remarks: A good eating licorice piece but highly priced at 85¢ the half pound.

Code 11M60
Hard Candy Mint Cuts
9½ ozs.—29¢

(Purchased in a chain drug store, Chicago, Ill.)

Appearance of Package: Good
Container: Cellulose bag, paper clip on top printed in blue and white.
Mint Cuts: Cuts are wrapped in cellulose. Cuts are clear hard candy, blue hard candy jacket.
Color: Good
Texture: Good
Flavor: Weak
Remarks: Suggest again as much flavor be used. A piece of this kind should have a good strong mint flavor.

Code 11D60
Peanut Butter Bar—2¢

(Purchased in a chain variety store, Chicago, Ill.)

Wrapper: Glassine wrapper printed in yellow, white and blue.
Piece: Piece is a hard candy honeycomb with peanut butter.
Coating: Good
Texture: Good
Taste: Good
Remarks: The best 2¢ piece of this kind we have examined this year.

Code 10G60
Salted Peanuts
½ lb.—31¢

(Purchased in a department store, Chicago, Ill.)

Sold in Bulk:
Peanuts:
Roast: Good
Texture: Good
Salting: Good
Taste: Good
Remarks: One of the best salted peanuts we have examined this year.

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VEGETABLE OIL RELEASING COMPOUND

Used Nationally for Over 5 Years
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Code 11P60
Assorted Wrapped Hard Candies
½ lb.—36¢

(Purchased in a chain variety store, Chicago, Ill.)

Sold in Bulk:
Candies: Candies are wrapped in colored cellulose.
Colors: Good
Molding: Good
Flavors: Fair
Remarks: Suggest some of the flavors be checked as they are very weak. Slightly high priced at 36¢ the half pound.

Code 11Q60
Toffee Crunches
½ lb.—35¢

(Purchased in a variety store, Chicago, Ill.)

Sold in Bulk:
Piece: Piece is a hard candy crunch in the shape of an almond, coated.
Finish: Good
Coating: Thin: Good
Crunch: Very good
Remarks: A good eating crunch. Suggest this piece be packed in a 3 or 4 ounce package, folding or window box.

The Candy Clinic's penetrating analysis of confectionery products is available to all subscribers to THE MANUFACTURING CONFECTIONER. Two samples of each product to be analyzed should be mailed to this magazine at 418 North Austin Boulevard, Oak Park, Illinois. Particular care should be taken that the package is well packed and wrapped so that injuries to the product sustained in mailing will not affect the analysis.

A notice of your product's analysis showing the code number under which it appears in the magazine will be mailed shortly after the magazine is off the press.

The December issue will carry a list of the year's best candies as chosen by the Clinic from products analyzed during the current year. Parchment awards are made to all manufacturers whose products are among the year's best.

The Candy Clinic is published as a service to subscribers and has been a feature department in THE MANUFACTURING CONFECTIONER for over forty years.

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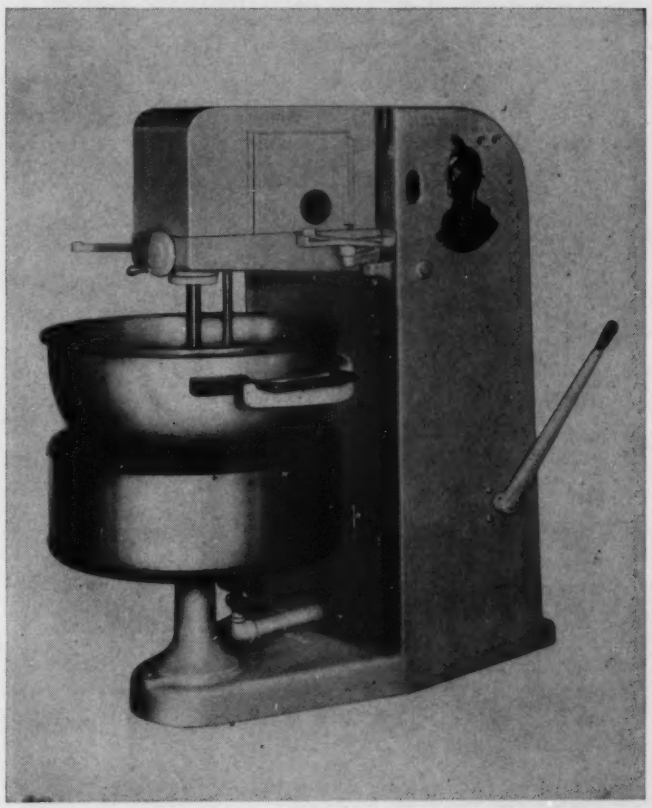
MODEL S-48

Thermostatic Gas Control—Variable Speed



The Savage Latest Fire Mixer, Model S-48, is Streamlined and Sanitary and has many new features and conveniences:

Automatic Temperature Control
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Break-back within floor space 32" x 48"
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You can save labor and obtain uniform batches by setting the thermostat for degree cook desired. It cooks and mixes batches of caramel, peanut brittle, peanut candies, fudge, nougat, gum work, and with double action agitator is ideal for coconut candies and heavy batches.

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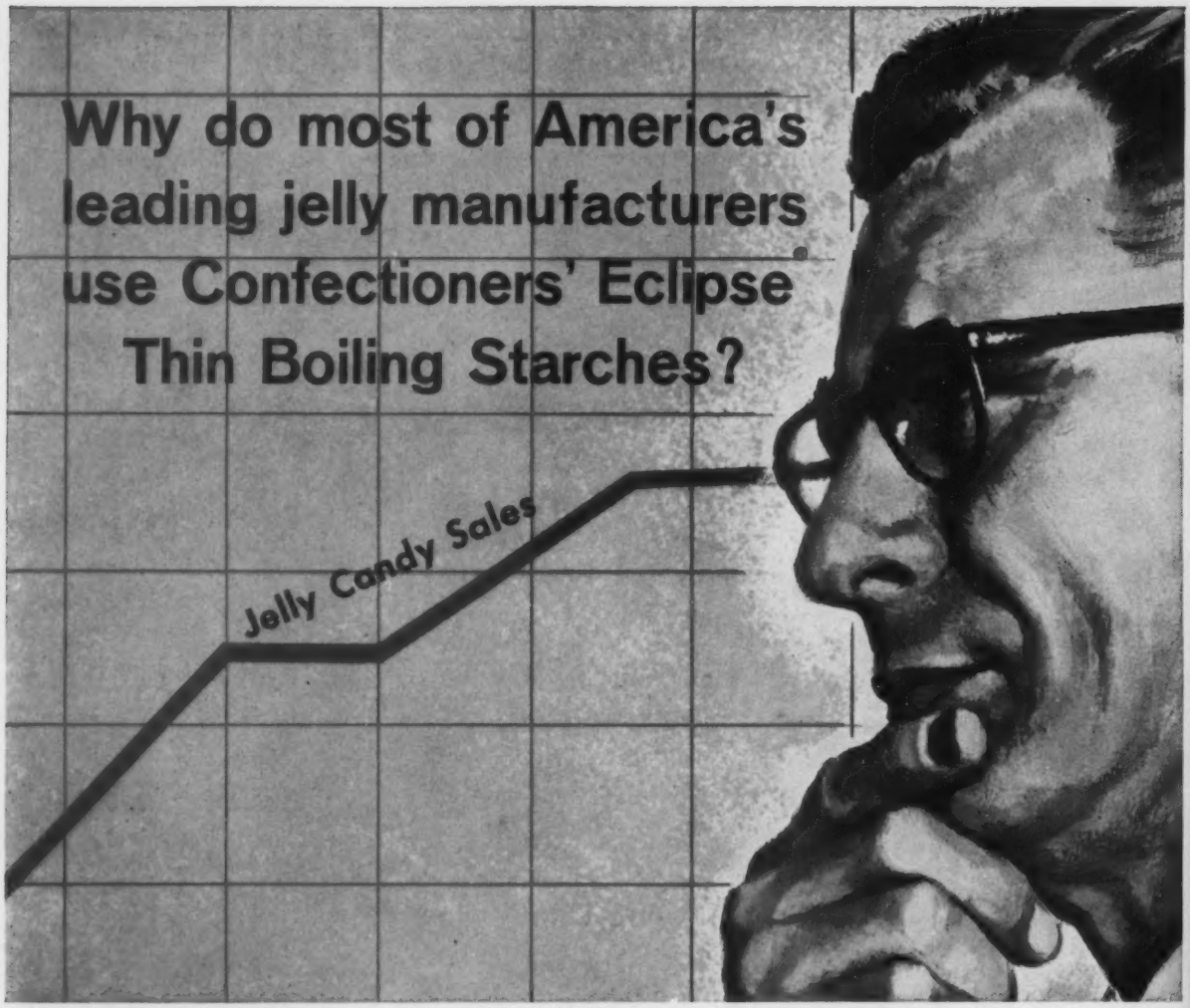
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It's Simple! Candy men tell us Eclipse® performs better!

Unsurpassed uniform quality, just-right tenderness, exceptional clarity, remarkably smooth texture—these are the characteristics consumers want most in gums and jellies.

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They know, too, they can always depend on Eclipse to give the same fine results every time. Thanks to its high degree of uniformity—they can consistently produce jelly candies that are never tough—never cloudy—never rubbery—but always with the appearance and eating qualities that keep customers reaching for their brand again and again.

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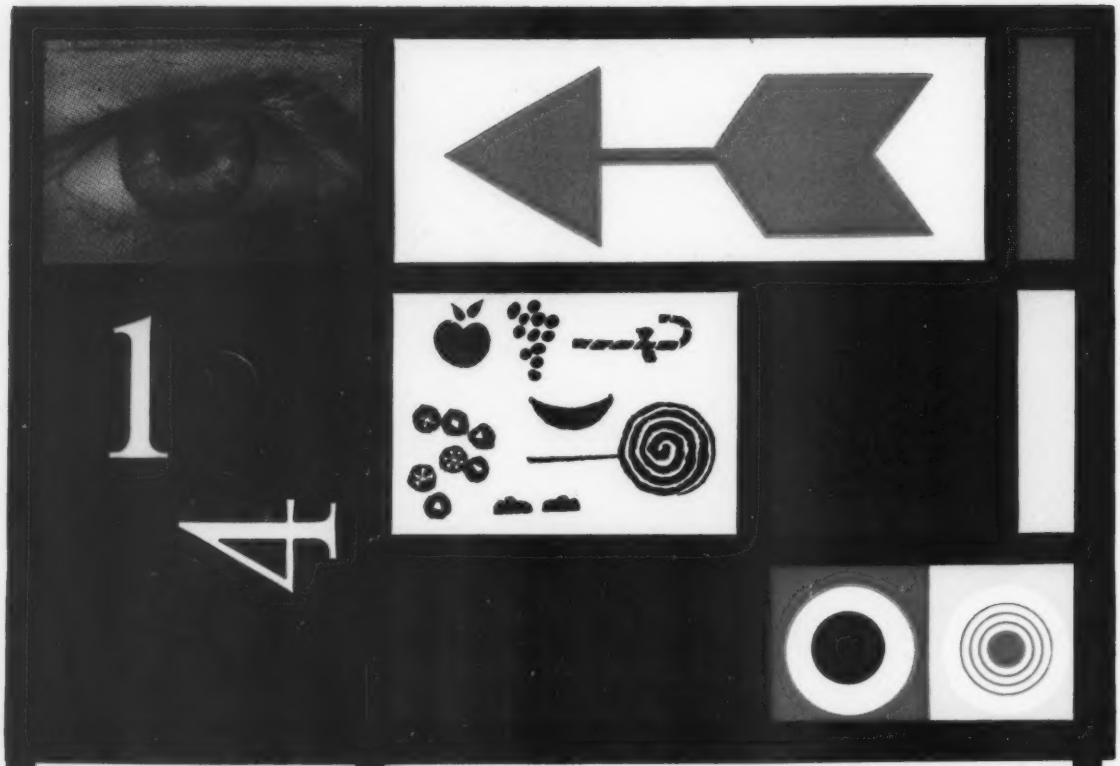

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NEWSMAKERS

American Maize-Products Company has named **Jerry C. Crumley** eastern division manager in the New York headquarters of American Maize. Mr. Crumley was previously district manager with headquarters in Saint Paul, Minnesota.

John J. Ahern, Jr. has been elected chairman of the board of **The Rap-In-Wax Company** and **P. M. Grieve** was elected president. Mr. Ahern has been president since 1954 and Mr. Grieve joined Rap-In-Wax in 1955 as treasurer and controller.

Frank E. Glotfelty, vice president and director of **Corn Products Company,** has been appointed executive assistant to the chairman and **R. C. Wheeler** will succeed him in his position of vice president, manufacturing. Mr. Glotfelty has been with Corn Products for more than forty years and Mr. Wheeler joined the company in 1937.

American Molasses Company has announced that its wholly owned subsidiary, **Nulomoline, Limited** of Montreal, has purchased all of the outstanding capital stock of Imperial Molasses Company, Limited, Montreal, Canada and its wholly owned division, Dominion Molasses Co., Ltd., of Dartmouth, Nova Scotia.

The Nestle Company has named **Harshe-Rotman & Druck, Inc.** to conduct an expanded corporate public relations program through the agency's offices in New York, Los Angeles, and Chicago.

Robert S. Wheeler has joined **Corn Products Sales Company** as vice president and marketing director in charge of new products. Mr. Wheeler was formerly advertising vice president for Boyle Midway, the Household Products Division of American Home Products Corporation.

The California Almond Growers Exchange, an association of 4,600 members who farm 80,000 acres of almonds, will mark its 50th anniversary at its annual meeting on November 11th in Sacramento, California. Last year the candy industry used 1-3/4 times more almonds than in the average of the prior three years, due in part to the bumper almond crop which caused an abrupt price reduction lowering the cost of the nuts substantially below the cost of the previous three years.

Lily-Tulip Cup Corporation has opened a new technical center in Commack, Long Island, New York, which will serve to consolidate all of the company's research and development functions under one roof. Co-managers of the technical center are **Stephen W. Amberg,** director of research and development and **Rufus S. Hovey,** director of manufacturing engineering.

Miles Chemical Company will open a two million dollar citric acid plant in Haifa, Israel, late in 1961. Fifty percent of production is scheduled for internal consumption in Israel and the balance will be available for export.

American Sugar Refining Company has announced the opening of a liquid sugar distribution station in the Dallas-Fort Worth area.

Twin Bonus of . . .

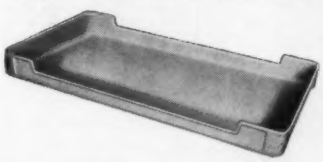
• improved sanitation
• lower maintenance costs
from TOTELINE

Here's three profit-making Toteline products for candymakers.

- Dust-proof stock boxes help make cleaner candy.
- Toteline molded fiber glass trays which keep candy in perfect condition during storage or transport.
- Drying trays to permit stacking yet give access to air for faster drying (pictured below).

All three help eliminate sanitation problems. Their smooth surfaces and rounded corners promote cleanliness. Just clean in hot water or steam.

Maintenance costs drop. Made of molded fiber glass, Toteline products are strong as steel on a weight basis. They can't dent, bend, warp or rot. There's no flaking or peeling. They last indefinitely and there are no nails or splinters to contaminate your products.



For further information on Toteline trays, fill in and return this coupon.

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Title _____

Company _____

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MOLDED FIBER GLASS TRAY CO., LINESVILLE, PA.
World's largest manufacturer of reinforced plastic trays and tote boxes

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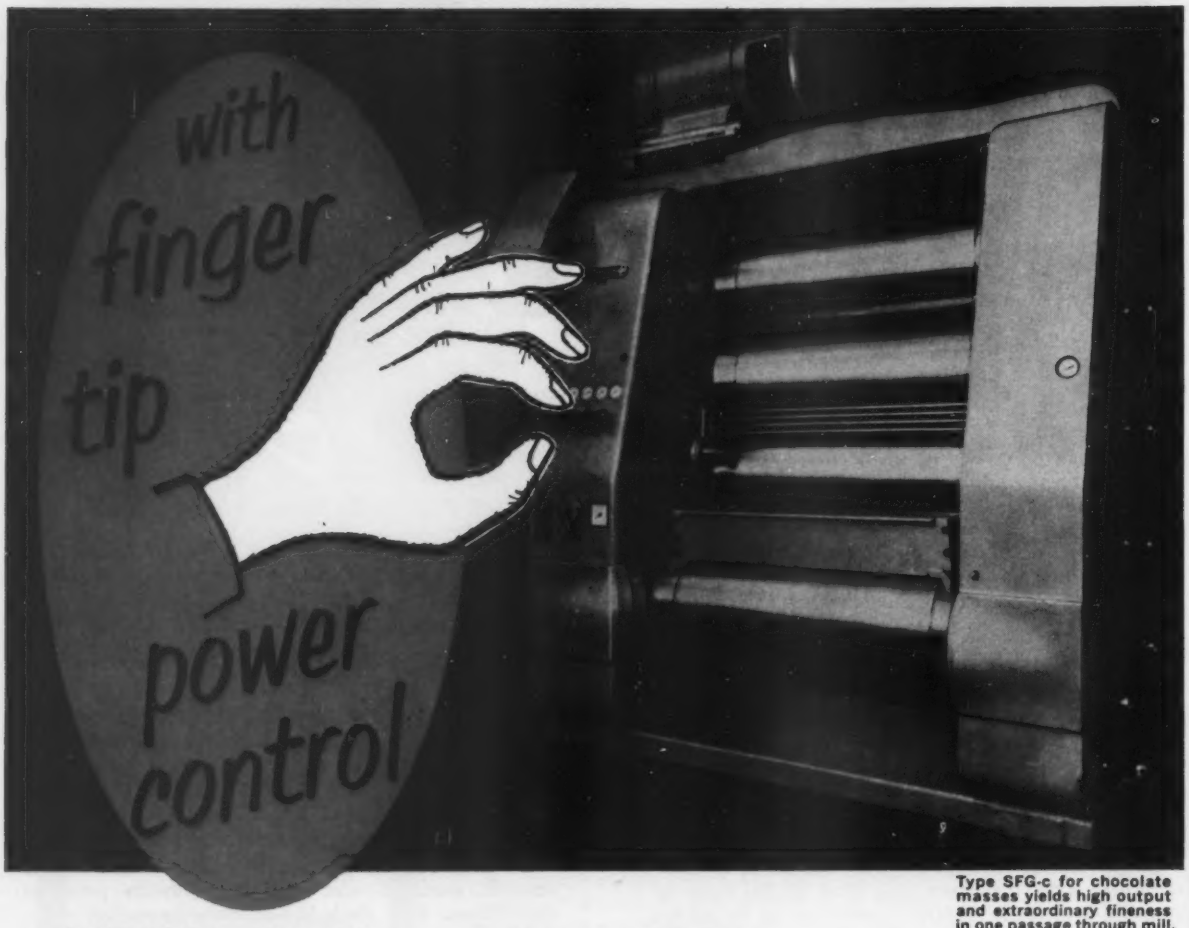

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NEW hydraulic system provides

easy regulation • higher pressures • absolute pressure stability

Constant Roll Pressures—Once pressure is set, rolls never need readjustment.

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Rolls Always Parallel—Single switch releases and re-engages rolls. Exact service pressures are automatically resumed along entire length of rolls. Time saved in cleaning enables one operator to attend several mills.

Buhler Rolls—These high quality rolls are world famous for their excellent grip and resistance to wear.

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The Hershey Chocolate Co. has opened a new Denver, Colorado, division office under the supervision of **R. P. Heath** who will supervise sales and distribution in the nine western states.

Ernest Semersky, for several years chief chemist with Chase Candy Company and Bunte Brothers, and recently with James B. Long Co., has joined **White Stokes Company.**

Robert Klein, formerly with the Capitol City Products Company, has joined **Durkee Famous Foods,** Bulk Division, as midwest sales manager.

United States Testing Company, Hoboken, New Jersey, has announced the formation of a Food Division to handle testing, research and development, analysis and product evaluation services for the food, beverage and confectionery industries. **Dr. Dean Foster,** who has been appointed manager of the new division, has announced that the new service will help manufacturers meet competition and solve their many food additive problems.

American Viscose Corporation's Film Division has announced the appointment of **Edward C. Clark, Jr.** as stock controller. Mr. Clark will supervise the control of cellophane inventories for the film plants and distribution centers.

Leonard A. Katz has retired from **F. Ritter & Co.** to follow interests in other fields. **Allan E. Katz,** executive vice president of the firm, has announced plans for an expanded program of research and development for the company.

Which
one is the imitation?
You cannot know the natural from the imitation by appearance, color or taste...You can only GUESS!
You, yourself, can prove the practical advantages of
FLORASYNTH'S
amazing new
RASPBERRY IMITATION SPECIAL
with the very first test gallon you use . . . it is rightfully compared to Nature's best . . . reflecting the sheer skill of our flavor craftsmen in its lasting, highly effective and economical utility . . . Sample upon request.
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EXECUTIVE OFFICES: 900 VAN NEST AVE., (BOX 12) NEW YORK 62, N. Y.
CHICAGO 6 · LOS ANGELES 21
Atlanta • Cincinnati • Detroit • Dallas • Boston
New Orleans • Minneapolis • St. Louis • San Francisco
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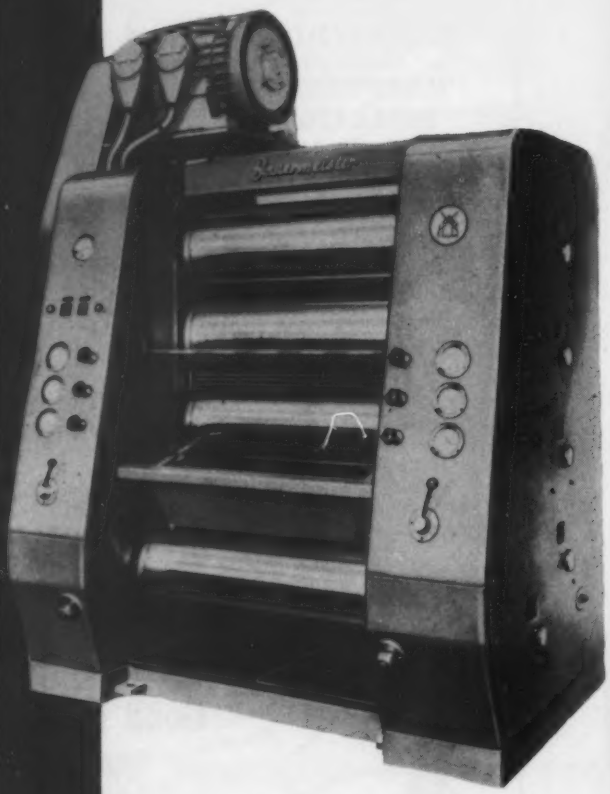
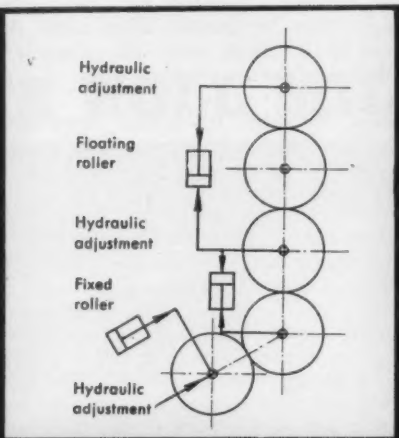
BE POSITIVE
People Taste Real Milk In Chocolate Made With
Mil-Lait®
Dress up your stars, bars, buds, and coated nuts and peanuts with REAL MILK CHOCOLATE made with Mil-Lait — the enzyme modified whole milk powder. Your supplier can demonstrate the delightful difference. Write for FREE samples.
DFL
DAIRYLAND FOOD LABORATORIES, INC.
620 Progress Avenue
P. O. Box 406
WAUKESHA, WISCONSIN

60% INCREASE IN CAPACITY





- *ALL* rolls under *positive* hydraulic control
- Newly designed hydraulic controls automatically compensate for any loss in pressure system
- Improved roll design complete with automatic water pressure control system gives more uniform heat transfer

WITH
EUROMAC BAUERMEISTER
HYDRAULIC
FIVE-ROLL REFINER
TYPE 591 SL-H

euromac

"A NEW DIMENSION IN MACHINERY SERVICE"

EUROMAC, INC.
PALISADES PARK, N. J.
WHITNEY 3-5890

Continued from page 7

Directors elected at Maud Muller

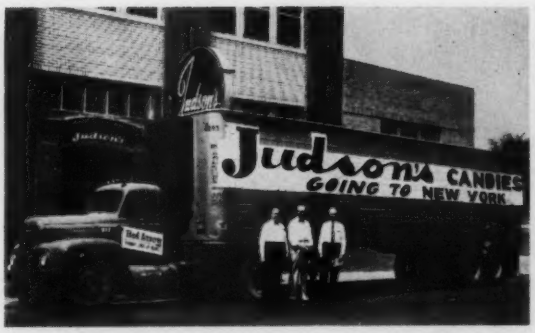
H. L. Jeffery, Jr., was re-elected president and chairman of the board of the Maud Muller Candy Company at the annual meeting of the firm's board of directors. Harold Jeffery, III, was re-elected as a director and vice-president and Gladys McCord was re-elected secretary-treasurer and a director. James Mulligan was also re-elected to the board of directors and Don Butler, of Creative Service Associates, was elected as a new member of the board.

Jeff Jaffe honored in NYC

Jeff Jaffe, president of Chunky Chocolate Corporation, was awarded a Certificate of Merit by the New York City Youth Board for his service on the Mayor's Committee of Industrial Leaders for Youth. Mr. Jaffe, who is co-chairman of the committee, organized a number of campaigns to fight delinquency in different ways. The Certificate of Merit was presented to Jaffe by Mayor Robert F. Wagner.

Belcher joins machinery firm

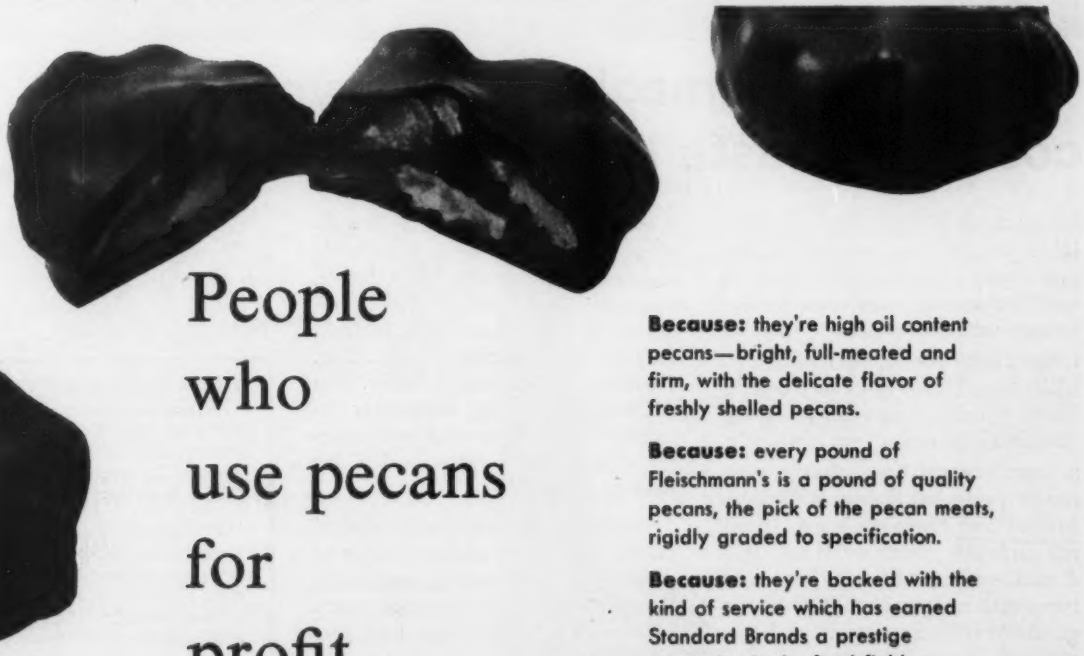
G. D. Belcher, formerly a vice president of Bunte Bros. Chase Candy Company has joined National Equipment Corporation and Union Confectionery Machinery Co., Inc. of New York City.



Three of the four Judson brothers, Tom, Jack and Bill, stand in front of a truck carrying thirteen tons of their candies up to New York for distribution in a 200 mile area of Buffalo. Judson's, a regional wholesaler, showed their pride in this first shipment to the northland from their San Antonio plant, by having a forty foot sign made to tell the contents of the refrigerated trailer truck.

Salesmen see PR film

The Confectionery Salesmen's Club of Baltimore saw a film strip dealing with the Candy, Chocolate, and Confectionery Institute and its public relations plans at the club's monthly meeting on October 3rd. This was the first showing of the new film strip which was prepared by Theodore R. Sills and Co., the Institute's public relations agency. A great deal of enthusiasm for the program was evidenced in a number of pledges received from members of the Baltimore club after the showing of the film.



People who use pecans for profit

Because: they're high oil content pecans—bright, full-meated and firm, with the delicate flavor of freshly shelled pecans.

Because: every pound of Fleischmann's is a pound of quality pecans, the pick of the pecan meats, rigidly graded to specification.

Because: they're backed with the kind of service which has earned Standard Brands a prestige reputation in the food field.

specify Fleischmann's *Fancy* Pecans

Standard Brands Incorporated—Branches in All Principal Cities

Chocolates never adhere to this slick Permagloss conveyor belt. It carries them through the 125' cooling tunnel of the Helen Elliott Candy Company, North Paterson, N. J.

New Permagloss conveyor belting costs less, lasts longer, outperforms them all!

PERMAGLOSS PLASTIC BELTING is rapidly replacing other materials on food and candy conveyor lines. And it's rapidly changing today's standards of belting performance. Here's why:

1. COSTS LESS! Permagloss costs less initially than almost any other belting. Needs no maintenance except wiping. Requires least down-time of all belts.

2. LASTS LONGER! Permagloss is a recently perfected union of DuPont Mylar® and Firestone Vinyl. It will not embrittle, crack or craze. It is dimensionally stable, unaffected by temperatures from 0° to 275° F. Has good abrasion resistance and tear strength. Lasts for *years*.

3. OUTPERFORMS THEM ALL! The Permagloss carrying surface is completely resistant to oils, greases, fats, solvents, moisture, acids (except nitric) and alkalis (except ammonium hydroxide). It is unmatched in sanitation. Remains tasteless and odorless. Has a mirror-smooth top surface for excellent release. Allows fast heat transfer — faster than cotton — ideal for cooling tunnels.

Permagloss belting can be altered on the machine to make a longer or shorter conveyor quickly and easily by your own maintenance man. Splicing is simple, quick and permanently strong.

We'll be glad to send you a sample of Permagloss belting. Along with the sample will come complete information and the address of your nearest Permagloss distributor.

TYPICAL USERS' COMMENTS

"Permagloss conveyor belting cut our labor costs 50%, thanks to unfailing, 'fall-off' release." Duffey Sausage Company, Carrollton, Ga. (Meat specialties)

"Our Permagloss cooling tunnel belt is still going strong after more than two years of daily use." Leon Sherman, Manager, S. Zitner Company, Philadelphia, Pa. (Manufacturing confectioner)

LASSITER
CORPORATION
1143 E. FOURTH STREET • CHARLOTTE 4, N. C.

NEW YORK, N.Y. • CHICAGO, ILL. • CHELTENHAM, PA. • ATLANTA, GA. • GREENSBORO, N.C. • DANVILLE, VA.
DESIGNERS AND MANUFACTURERS OF PRINTED PACKAGING IN FILM, FOIL, PAPER, PAPERBOARD

Phila. AACT plans panel program

The Philadelphia Section of the American Association of Candy Technologists will hold a question and answer panel discussion at its meeting on November 17th to be held at the Dairy Maid Restaurant in Philadelphia.

Dr. R. C. Welch, Wilbur Chocolate Co. will answer questions on chocolate and compound coating; John Vassos, S. F. Whitman & Son will handle plant problems; James A. King will discuss formulation problems; William Duck will answer questions on European and American research; and Louis Lang along with other prominent men in the industry will participate in answering members and guests' questions.

Candy exhibits at vending show

A number of candy and gum manufacturers exhibited at the 14th annual convention-exhibit of the National Automatic Merchandising Association at Miami Beach, Florida early this month. Among them were Beech-Nut Life Savers, Inc., Blumenthal Bros., Charms Company, Chunky Chocolate, Clark Bros. Chewing Gum Co., The D. L. Clark Co., Curtiss Candy Co., Delicia, Inc., Hershey Chocolate Corp., Hollywood Brands, Inc., King-Kup Candies, Inc., Lucy Ellen Candies, Mars, Inc., The Nestle Co., Planters Nut & Chocolate, H. B. Reese Candy Co., Inc., Switzer's Licorice Company, James O. Welch Company and Wm. Wrigley, Jr. Company.

Whitman exec speaks at conference

John J. Barranger, vice president and treasurer of Stephen F. Whitman & Son, Inc., will speak on "Interesting Production Personnel in Cost Control" at the 29th annual conference of the Controllers Institute of America. He will address a foods, beverages and allied products round table on the opening day of the conference, October 23rd at the Fairmont Hotel, San Francisco.

Southeastern AACT hears duPont man

Proper storage conditions for cellophane and other transparent films was the topic of an address given by Charles R. Seiler of the Film Department of E. I. duPont de Nemours & Company at the monthly meeting of the Southeastern Section of the American Association of Candy Technologists in Atlanta, Georgia. Transmission of flavors and aromatics through different types of packaging film was also discussed by Mr. Seiler at the September 23rd meeting.

GO MODERN..

with

Stehling Coating Mixers Have Proved Superior . . For

- Melanging
- Emulsifying
- Storing
- Making compound coatings
- Melting whole 10 lb. cakes

Over 300 Stehling mixers in daily use attest to the wide acceptance of this fine machine for the manufacture and use of coatings. Their rugged construction, superior mixing action, and efficient operation have made "Stehling" a by-word in the industry.

If you make or use large quantities of coatings, either pure or compound, you can be more efficient with a Stehling. Now available in five capacities 6,000 lb., 13,000 lb., 20,000 lb., 30,000 lb., and 45,000 lb., Also in single and double compartment arrangements.

Write for literature and prices.

MAKE SURE IT'S Stehling AND BE SURE

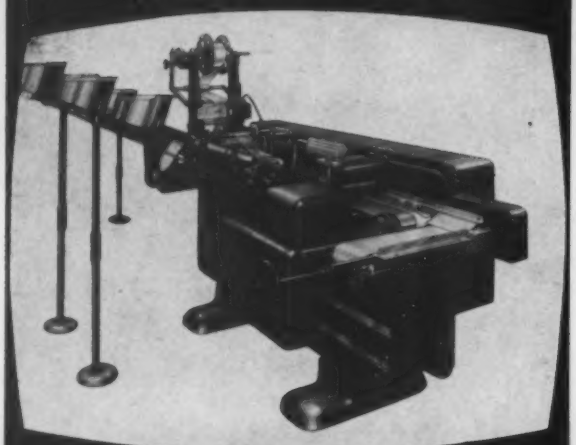
CHAS. H. STEHLING CO.

HUDSON SHARP'S
new and improved

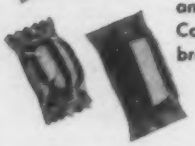
FMC
Campbell
WRAPPER

Wraps and Seals up to 650 Piece Candies — per minute!

- Wraps and seals without twisting ends
- Saves up to 35% in wrap materials
- Wraps single or multiple pieces per unit



- Wraps with glassines, wax papers, cellophane, foils and other materials
- Heat or and glue sealing
- Hopper or conveyor-type machine infeeding
- Wraps candies of any shape or size
- Wraps hard, soft, crisp or fragile candies without crush or breakage
- Saves labor with 1 person operation



The hit of the industry, this automatic wrapper packages candy balls, jaw breakers, kisses and similar piece candies with machine gun speed. Candies retain their freshness longer, too, for wrap material is completely seam and end sealed. Users report fastest packaging in the field — lowest material cost operations. Write for details and latest copy of the new Campbell Wrapper brochure.

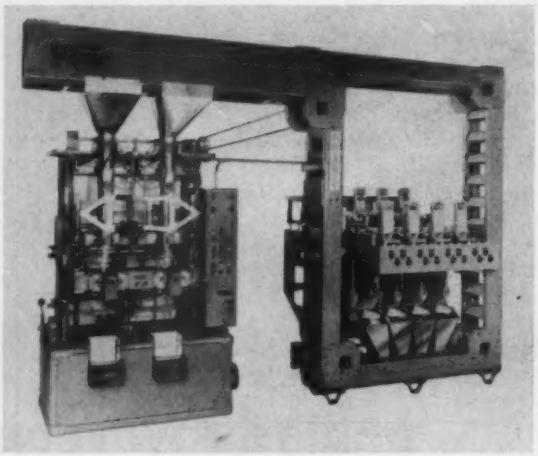
Putting Ideas to Work

fmc
FOOD MACHINERY AND CHEMICAL CORPORATION
FMC Packaging Machinery Division
Hudson-Sharp Machine Company
1201 MAIN STREET • GREEN BAY, WISCONSIN

New Products

A new plastic that combines thermal insulation, resiliency, grease resistance, waterproofness and high fashion decorative capability has been developed. Called Dyna-Foam, the new plastic can be produced at a cost competitive with paper and can be used in conjunction with paper. This extruded, low-density, expanded polystyrene foam is available in sheet, film, lay-flat tubing, pipe, board, solid rod and special shapes. The product can be produced in color and takes flexographic, rotogravure and silk screen inks, as well as offset and letter press printing. In sheet form it is a pearlescent white. It can be glued or laminated to paper, paperboard, foil, Mylar and polystyrene. It can be heat sealed and slitting, die cutting and sheeting can be done on standard equipment.

For further information write: Dyna-Foam Corporation, Ellenville, New York.



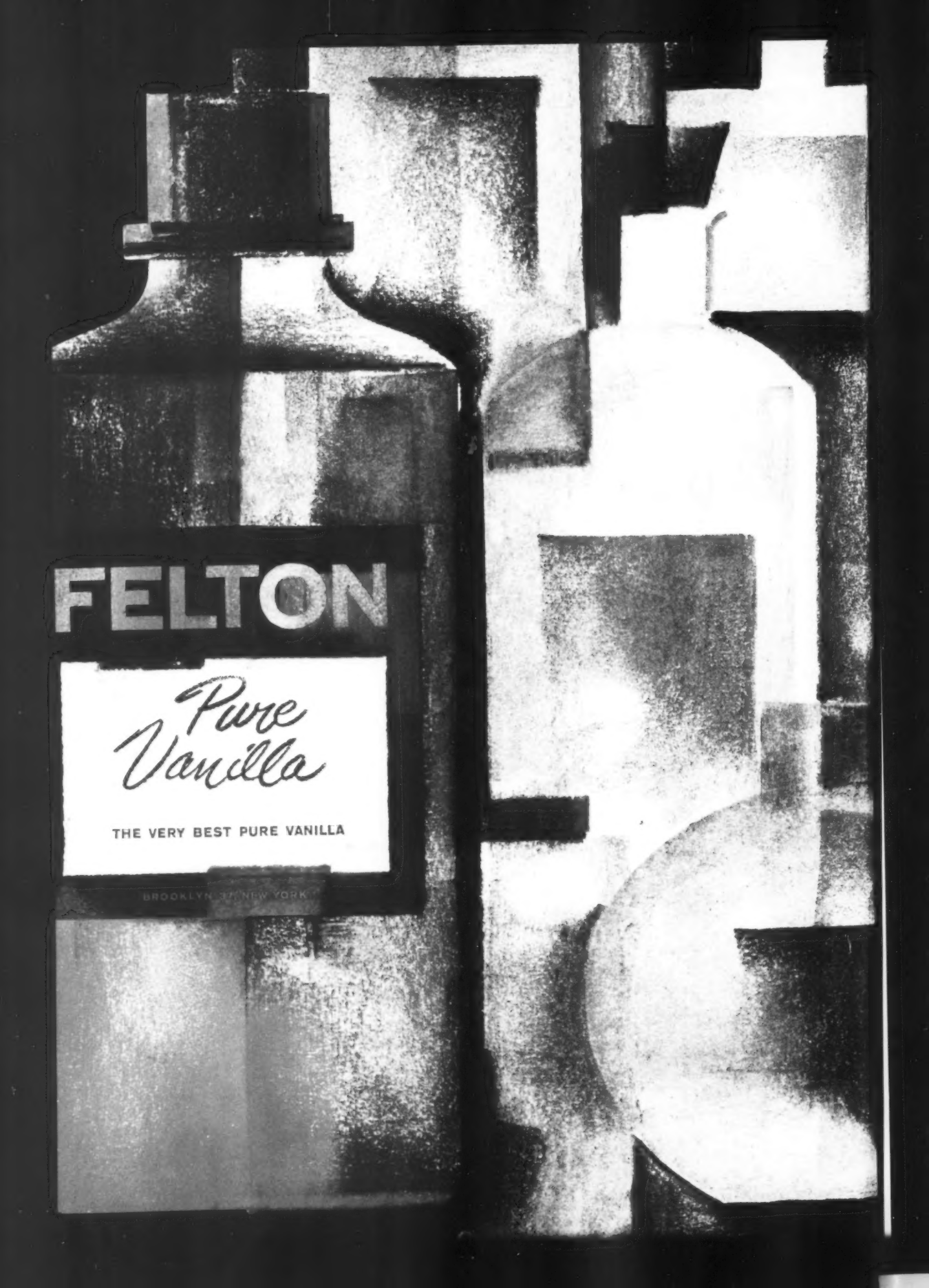
A scale has been designed to bring a high degree of accuracy to automatic weighing for form, fill and seal equipment. A double bucket scale receives the initial charge from the bulk supply, weighs it and drops it into a second weigh bucket. A dribble feed then fills the bucket to proper weight. The bulk charge is delivered to the first scale as the first charge is being dribbled to the second scale. This gives each scale a time period equal to 100% of the loading cycle. A dribble feed of 3 feet in length which passes the product over two individual vibrators assures uniform dribble feed and perfect product separation so that weights with an accuracy of plus one piece is possible. These scales are available for any product which can be weighed automatically.

For further information write: Hayssen Manufacturing Company, Sheboygan, Wisconsin.

A line of antioxidant treated paperboard, FDA approved, is now available. Especially suited to nut meats and chocolate items the paperboard can be incorporated into either HT greaseproof or polyethylene coatings at nominal increase in cost. The antioxidant helps increase shelf life by retarding rancidity. It is available in pure white food board and other popular grades for use as base cards, dividers, partitions and layers.

For further information write: Murnane Paper Co., 1510 N. Kostner Ave., Chicago 51, Illinois.

FELTON
Pure Vanilla
THE VERY BEST PURE VANILLA
BROOKLYN 37, NEW YORK


FELTON
Pure
Vanilla
THE VERY BEST PURE VANILLA

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A pre-cooked fondant in dry form made of all-cane sugar has been introduced for use in making fondant-based candies. The product offers the qualities of prepared fondant eliminating the inconvenience of handling plastic fondant. It imparts a clean, unmasked flavor to finished fondant-type candies and is simple to use, particularly for pan-coating cordial cherries and other candies in which the moisture in wet fondant limits its use.

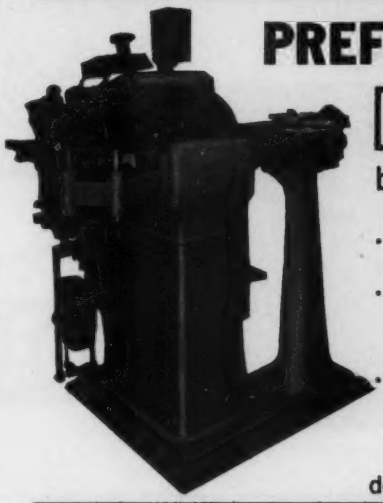
For further information write: American Molasses Company, The Nulomoline Division, 120 Wall Street, New York 5, New York.

A new automatic radiant heat nut roasting and cooling system is now available. The roaster toasts nuts or seeds uniformly, can be charged automatically from bulk storage and discharges automatically to provide continuous roasting on a batch basis. A color control assures uniform coloring, acetates the charging and discharging of the roaster and also controls the cooler.

For further information write: The Bauer Bros. Co., Springfield, Ohio.

Two films have been developed which are special combinations of two light gauge cellulose base sheets with a thin polymer resin inner ply. One has improved moistureproof, heat sealing, nitrocellulose coating on both surfaces; the other has a special polymer coating on both surfaces to give strong heat sealing and excellent moistureproof and gasproof characteristics. Both surface coatings are fully bonded to the base sheets. Patents are pending.

For further information write: American Viscose Corporation, 1617 Pennsylvania Blvd., Philadelphia 3, Pa.



PREFERRED

IDEAL

because...

...faster

...more efficient

...greater production

write for detailed brochure

500 caramels cut and wrapped in a minute

investigate today

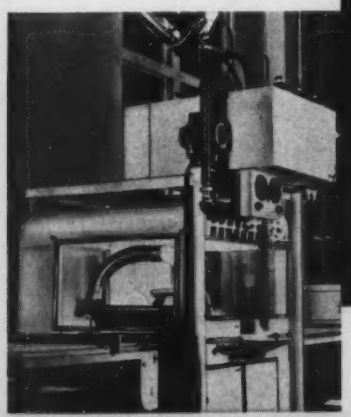
Established 1906

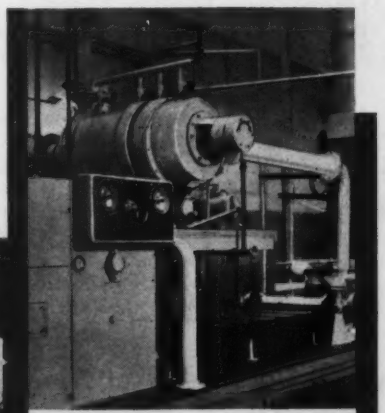
IDEAL WRAPPING MACHINE COMPANY

MIDDLETOWN, NEW YORK, U. S. A.

Type TA XIII

Capacities up to 1100 lbs/h. The picture below shows the tempering machine installed on a Coater.





Type TA III

Capacities up to 4000 lbs/h. The tempering machine shown above is installed on a fully automatic Moulding Installation.

Fully automatic Tempering Machines
Types TA III & TA XIII

Ideal design of cooling, mixing, heating and stabilizing sections to obtain a well-tempered chocolate of the monomolecular crystallization giving a glossy product of long shelf life.

Economic operation with low water consumption.

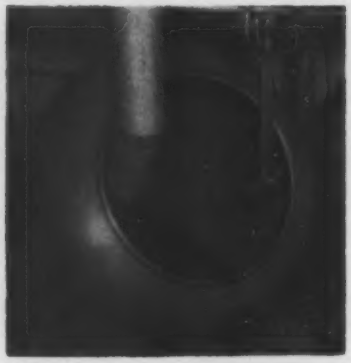
No attention required when set for continuous operation.

Easy installation immediately where tempering of chocolate is required, avoiding long pipe lines and consequent interference in the tempering obtained.

Separate location of control panels.

MIKROVÆRK A/S

American Branch Office: Mikrovaerk (Canada) Ltd., 90, Advance Road, Toronto 18, Ont. Telephone: BELmont 1-2259



LATINI'S FAMOUS CHOCOLATE SPRAYING SYSTEM

Unexcelled for panned goods and pre-building for the enrober.

Increases production

Eliminates doubles and clusters

Uniform coating

Low labor factor

Available in 4-pan Systems and up. A non-skilled help operation with a daily output of approximately 1,000 pounds per pan.

LATINI CHOCOLATE SPRAYING SYSTEM

Hohberger Continuous Hard Candy Cutter

Waffles, pillows, chips, or straws. Up to 150 feet per minute. Perfect sealing on filled pieces.

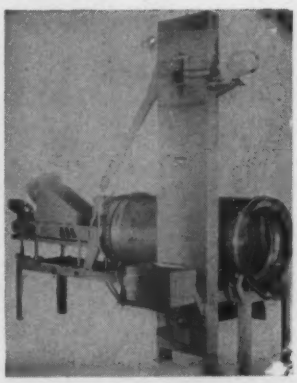
Hohberger Cream Machine

Up to 2,000 pounds per hour. Straight sugar or with any amount of corn syrup. NEW: Special-sized Dome for liquid sugar users. No pre-cook kettles required.

Now available: Special cooking dome for liquid-sugar users. Pre-cook kettles eliminated.

BERKS HARD CANDY MIXER

Mixes color, flavor and acid in 75 to 125 pound batches at rate of 1000 lbs./hr., 10% scrap may be included. Saves labor and floor space. Assures uniform mixing and constant rate of production through the day.



Latini Sugar Sander Guaranteed To Properly Sand The Output of any Starch Machine

Non-corrosive metals wherever sugar and steam meet.

Representative: *John Sheffman, Inc.*

152 West 42 Street **New York 36, N.Y.**

the manufacturing retailer

A Quality Image for the Retailer

By Raymond Lane
Lane-Bender, Inc.

The Manufacturing Retailer is facing fierce competition these days from modern merchandising methods of supermarkets and drug stores. His main defense is in emphasizing the quality of his product. In an effort to help retailers to learn how to establish a quality image and gain prestige for their operations *The Manufacturing Confectioner* will publish periodically a series of articles on these subjects by Mr. Raymond Lane, an industrial and packaging designer who has worked in the retail candy field for many years. In his first article Mr. Lane describes a new service which he is offering retailers and in subsequent articles he will describe case history problems of retailers and how they were solved. Mr. Lane will be happy to answer questions on the subjects he covers and subscribers may send inquiries to him in care of this magazine, 418 North Austin Blvd., Oak Park, Illinois.

Raymond Lane has had many years of experience in the package design field and is a member of the Package Designers Council. He is president of Lane-Bender, Inc., which has designed award-winning packages for several candy manufacturers. Lane-Bender are members of the Associated Retail Confectioners and Mr. Lane was a principal speaker at the Mid-Winter meeting in Miami Beach this past February.

For ten years the candy industry has been looking for some way to sell more product. For ten years the manufacturing retailer has been concerned with ever decreasing sales.

In all these passed years the manufacturing retailer has been listening to conflicting thoughts on methods of selling more candy. Finally, many of these ideas were jelled into a concrete practical method of telling the story about candy to the public. Now the many facets of the candy industry have backed up a 3/4 million dollar public relations program which should help get the candy story over effectively. But will this directly help the manufacturing retailer? Will this allay his fears of decreasing sales? Will this give him direction on merchandising his particular products within the area he is selling?

Lane-Bender has thought for these many years of the methods of helping sell more candy. We've discussed numerous ideas at the Associated Retail Confectioners meetings in Chicago, Boston, Philadelphia and New York; but never have we reached the core of the problem. Candy is a prestige item, and therefore, should be upgraded so that the total image becomes comparable with the product.

How does a retailer go about creating a good image for his operation? Obviously, he cannot afford professional merchandising advice; and even if he thought it was feasible in his operation to retain merchandising and design aid, it would be difficult for him to know in which direction he should move. The question of upgrading a store for instance becomes complicated when one considers all the aspects necessary in a program of that kind. There are packages to consider, aisle traffic, lighting and window displays, signs, color and exterior of the store. Where does one start?

The situation plagued us because here was a potential market for our services and yet not able to use us. Then we realized that if this service was used by the many smaller companies cooperatively, we could simplify the method of disseminating information and reduce the cost by producing answers using a minimum time for each client anywhere in the country.

Our service consists of surveying an operation through the question and answer method. It eliminates the cost for travel and time away from our office. For instance, we have prepared 50 questions which are sent to the operation involved. These pertinent questions tell us all we need to know about the particular set-up and also the operator's opinion of his problem. Our photographers in each area take photographs of the individual store or stores which the owner labels for our visual edification. Our staff analyzes the questionnaire and the photographs and delivers a report with concrete suggestions for upgrading the store, its fixtures, its counters, its packages, its lighting, its aisle traffic, etc. Now the owner has a complete picture of what would be entailed in upgrading his total image.

Suppose we take each part of the necessary ingredients we spoke of, in order to get a total image that would induce people to buy your product. Then there will be an awareness of the necessities inherent in the merchandising program. True, there will be many questions, which I will be glad to answer if you drop a note in care of this magazine.

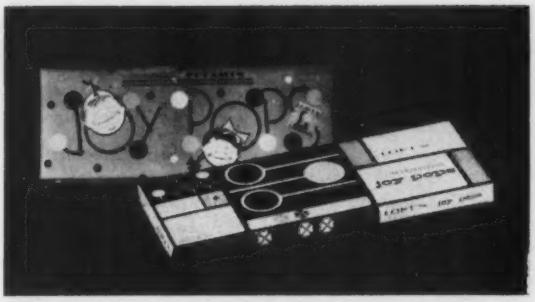
The logo is your name, which pictures your product in the minds of the public as either good or bad. It is the trade mark, it is a visual display conjuring up all kinds of ideas, feelings, sensations, and innuendoes in the minds of the public. This mark must have distinction, it must be eye-catching, and have retention value. Your *signage* must be clear and contain your trade mark in such a way that it will attract attention. It must sell your product by enticing the public to enter your store. Your *windows* should be decorative yet simple, easy for a passerby to get the point you are trying to get across, immediately. On entering the store, *the aisles* should guide the customer through each area and not hinder his advance into the back of your store. The *color*, a most important item, must create in the mind of the buyer, quality, a security in knowing he will be treated right, a restful atmosphere to give him the opportunity to pick and choose. The *lighting* must be brilliant yet soft, must highlight the candies to their best advantage without melting the chocolates. The *counters* must be low enough to give the feeling to the customer

MERCKENS

Makers of Fine Chocolate and Cocoa

MERCKENS CHOCOLATE COMPANY
155 Great Arrow Avenue • Buffalo 7, New York

Branches and Warehouse Stocks in . . . BOSTON, NEW YORK, CHICAGO, LOS ANGELES, OAKLAND, SALT LAKE CITY, SEATTLE



The Joy Pop box as it was is shown on the left; the re-designed box is on the right. The new box clearly and emphatically says "quality" and at the same time it relates the outer wraps to the inner product by use of bright colors indicating the flavors of the lollipops.

that your store welcomes his purchases by being able to talk to the sales clerk.

The package must be gay and appealing and yet sell your message in the customer's home. It must say quality, it must say prestige because when a buyer purchases your product he is purchasing prestige.

Here at Lane-Bender we are continually looking into new materials, new ideas, to help people in your category to do a better job in candy sales. We feel that your participation in the new public relations program must back up in your area the message the publicity people are trying to get across, and you must do your part in helping create a better image for all.

A look at our Loft's file shows how a manufacturer retailer goes about upgrading his image. Starting with the Loft name which was every different size imaginable on their signs, packages, stationery —we created a standard logo which is being used now. The name was refined slightly to bring it up-to-date and now it appears everywhere exactly the same all the time. It is legible and has retention value.

As part of the corporate design program for Loft's, we produced a new package for their Joy Pops. Here the old design did not tell the potential customers what was contained in the boxes. To sell lollipops at a premium price of 89¢, it was necessary that the box be cheerful, colorful, indicate quality, and also show that there were different flavored pops inside. Loft's increased their sale of Joy Pops by 25% since the new package was introduced.

Sales increases such as these can be the reward won by any manufacturing retailer who decides that the quality image should be his goal and who explores every available avenue to reach this goal.

People who use pecans for profit...

Because: they're high oil content pecans—bright, full-meated and firm, with the delicate flavor of freshly shelled pecans.

Because: every pound of Fleischmann's is a pound of quality pecans, the pick of the pecan meats, rigidly graded to specification.

Because: they're backed with the kind of service which has earned Standard Brands a prestige reputation in the food field.

specify Fleischmann's *Fancy* Pecans

Standard Brands Incorporated—Branches in All Principal Cities

The Candy Carousel

Bea Buzzell, store manager, has learned that a cheery smile and a pleasant suggestion make the sales figures rise.

This is one of the seasonal displays used in the store throughout the year. The giant bunny is for an Easter display.

If you happen to be driving along U. S. Highway 40 in the area of Elkton, Maryland, you'll see some customer-attracting gimmicks devised by an enterprising manufacturing retailer. Numerous road signs leading to the shop invite drivers to stop at the "Candy Carousel" and try a free sample. The signs also call attention to the fact that customers can watch the candies being made daily.

The big Candy Carousel sign in front of the shop is a sure stopper for children. Its peppermint stick poles are a real eye-catcher and the big word C-A-N-D-Y makes it impossible for a motorist to miss the modern, glass-fronted store. Colored flood lights bounce off of the glass exterior attracting attention when the store is open evenings.

Inside the displays are kept current and timely with seasonal specialties and decorative touches in keeping with the time of year. A sampling program has proven very effective in enticing customers to buy a little more. The kitchen is open for inspection and as most retailers will agree, a customer who watches candy being made has a very hard time resisting buying the product he followed from kettle to package.

Trans-American Management Co., Inc. of New York City, managed by Mr. Marion Harper, Sr., opened Candy Carousel in November 1956. Mrs. Harper designed the attractive interior decorations of the shop which was built by Henry A. Knott, Inc. of Baltimore.

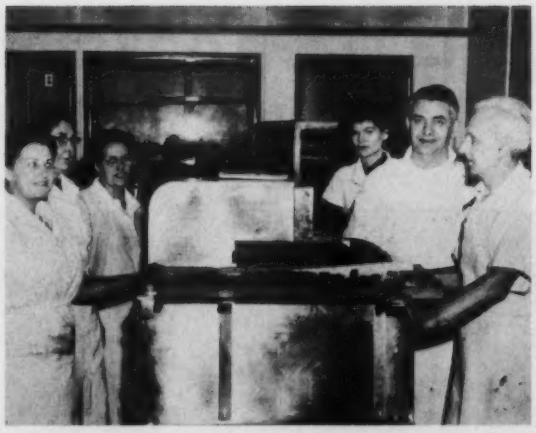
A staff of fourteen includes the store manager, Bea Buzzell ("Beulah" to friends and customers), an assistant manager, plant supervisor and assistant, a hand coater, a dipping machine operator and assistant, three packers, three sales girls and a janitor-handyman.

Harold Lund is the plant supervisor and head candymaker at Candy Carousel. He has been in the business for over forty years and out of his years of experience Candy Carousel's specialty items were created. The two most important specialties are "Sailaway Boats", a brazil nut in vanilla caramel coated with dark chocolate and "Dutch Mints" in three flavors, coffee mint, orange mint, and regular mint made in sandwiched layers with the finished product not more than 1/16" thick.

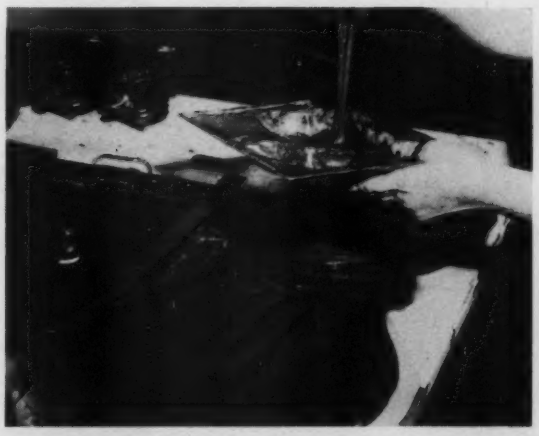
In addition to their wide variety of candies, Candy Carousel offers gifts ranging from inexpensive novelties to expensive imports such as glass from Sweden and metal work from Egypt. All purchases, be they candy, or novelty items are gift-wrapped free.

Thus eye-catching signs, attractive store front, interesting displays, a sampling program and an open kitchen, combined with services such as free gift wrapping and availability of other gift items prove extremely effective in attracting and keeping customers.

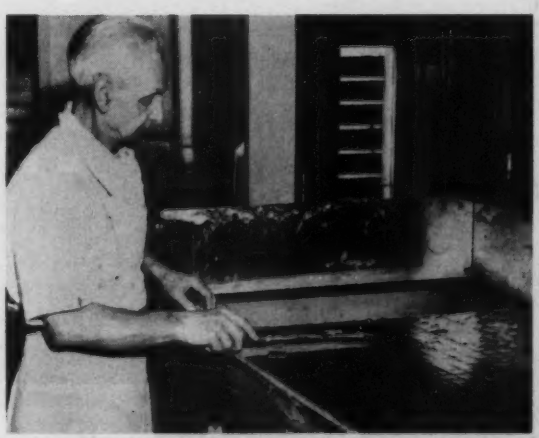
In four years of doing business on Route 40 Candy Carousel has served many transients, but with high standards of product quality the store has found favor with many local people who make an occasion of a visit to the "merry-go-round" store.



Some of Candy Carousel's staff gather with Harold Lund (on the right), head candymaker, as he shows them operation of the company's coater.



Candy Carousel sells hand molded chocolates at holiday time and these solid chocolate items enhance the quality image of the company in the minds of the customers.

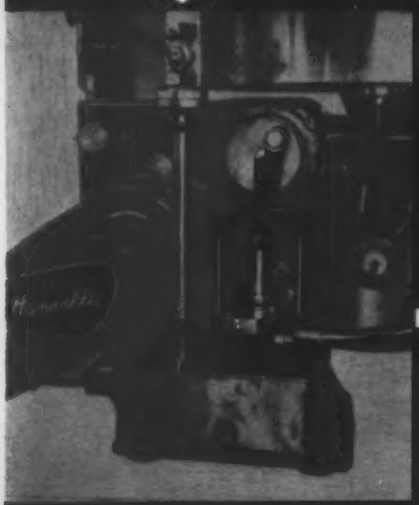


Harold Lund, plant supervisor and head candymaker, is getting some of the store's special Dutch Mints ready to go out front for sale.

AUTOMATION through Hansella

LIQUID SUGAR + CORN SYRUP

CONTINUOUSLY FED-IN AUTOMATICALLY PROPORTIONED **DIRECT** FROM YOUR **PRESENT** BULK SUPPLY SYSTEM



NOTE: CHANGE GEARS FOR ALL TYPES OF FORMULAS

RESULTS IN A CONTINUOUS FLOW OF **UNIFORM CRYSTAL-CLEAR**

PRECOOKED SYRUP

READY FOR FURTHER PROCESSING

Hansella

PRECOOKERS 144

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...with
PAK-APEAL
plastic trays

Picture your candy product nestled in a PAK-APEAL plastic tray . . . a tray that is vacuum formed to fit your product perfectly . . . a tray of custom design and color created to compliment your present outside container . . . a tray designed to provide greater product protection . . . and finally, a tray that permits fully automated packaging.

It's truly a picture of profits, because only PAK-APEAL gives your package so much sales appeal and cuts packaging cost at the same time.

Write today for PAK-APEAL folder on better packaging.

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CALENDAR

November 10; New York Section, AACT, monthly meeting, Busto's Restaurant, New York City.

November 11; Los Angeles Confectionery Sales Club, noon meeting, Roger Young Auditorium, Los Angeles, Calif.

November 15; Boston Section, AACT, monthly meeting, Beacon Street Hotel, Boston, Mass.

November 15; Chicago Section, AACT, monthly meeting, The Dania Club, Chicago, Illinois.

November 21; Confectionery Salesmen's Club of Philadelphia, 1:30 PM meeting, 2601 Parkway, Philadelphia, Pa.

November 25; Boston Confectionery Salesmen's Club, Inc., 8:00 PM meeting, Kenmore Hotel, Boston, Mass.

November 26; Southwestern Candy Salesmen's Association, 12 noon meeting, Sammys Restaurant, Dallas, Texas.

November 26; Confectionery Salesmen's Club of Philadelphia, Greater Philadelphia Area Candy Banquet, Palumbo's, 824 Catherine St., Philadelphia, Pa.

December 5; Denver Mile Hi Candy Club, 7:45 AM, breakfast meeting, Denver Athletic Club, Denver, Colorado.

December 5; Retail Confectioners Association of Philadelphia, Inc., 6:30 PM meeting, Dairy Maid Restaurant, Philadelphia, Pa.

December 15-16; Western Confectionery Salesmen's Association, annual meeting, LaSalle Hotel, Chicago, Illinois.

1961

January 18-19; Manufacturing Confectioners Traffic Conference, annual meeting, New York City.

May 2-9; Macropak, Sixth International Packaging Exhibition, R.A.I. Exhibition Halls, Amsterdam, Holland.

June 11-15; National Confectioners Association, 78th annual convention, Conrad Hilton Hotel, Chicago, Ill.

June 11-15; Association Retail Confectioners of the United States, annual convention, Drake Hotel, Chicago, Ill.

November 7-10; Packaging Machinery Manufacturers Institute, 1961 trade show, Cobo Hall, Detroit, Michigan.

Put your hard candy department on a high profit item

NEW HARD CANDY WHISTLE MACHINES NOW AVAILABLE

40,000 per 7 hour day. 5¢ or 10¢ size.

For further information write:

Whistle Pop Candy Co.

P. O. Box 272
Inglewood, California

EFFICIENT *to use...to sell*– BAG TOPS *by* CROCKER

Seal fast, firmly...sturdy stock won't tear or abrade during processing. Color fast inks won't fade, scuff or rub off. Supermarkets say Crocker bags tops sell fastest!

FAST DELIVERY! You can control accuracy and save money by using Crocker's 24-48 hour delivery service (anywhere in the country)!

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SALES OFFICES: . . . Atlanta · Baltimore · Cincinnati Chicago · Dallas · Detroit · Jackson, Miss. · Los Angeles Minneapolis · New York · Oakland, California · Omaha Philadelphia · Portland, Oregon · St. Louis · San Diego Seattle · Tampa · Winter Haven · San Francisco

New foreign subscription rates effective in 1961

Beginning in January of 1961 it will be necessary for us to raise our subscription rates for readers outside of the United States and Canada.

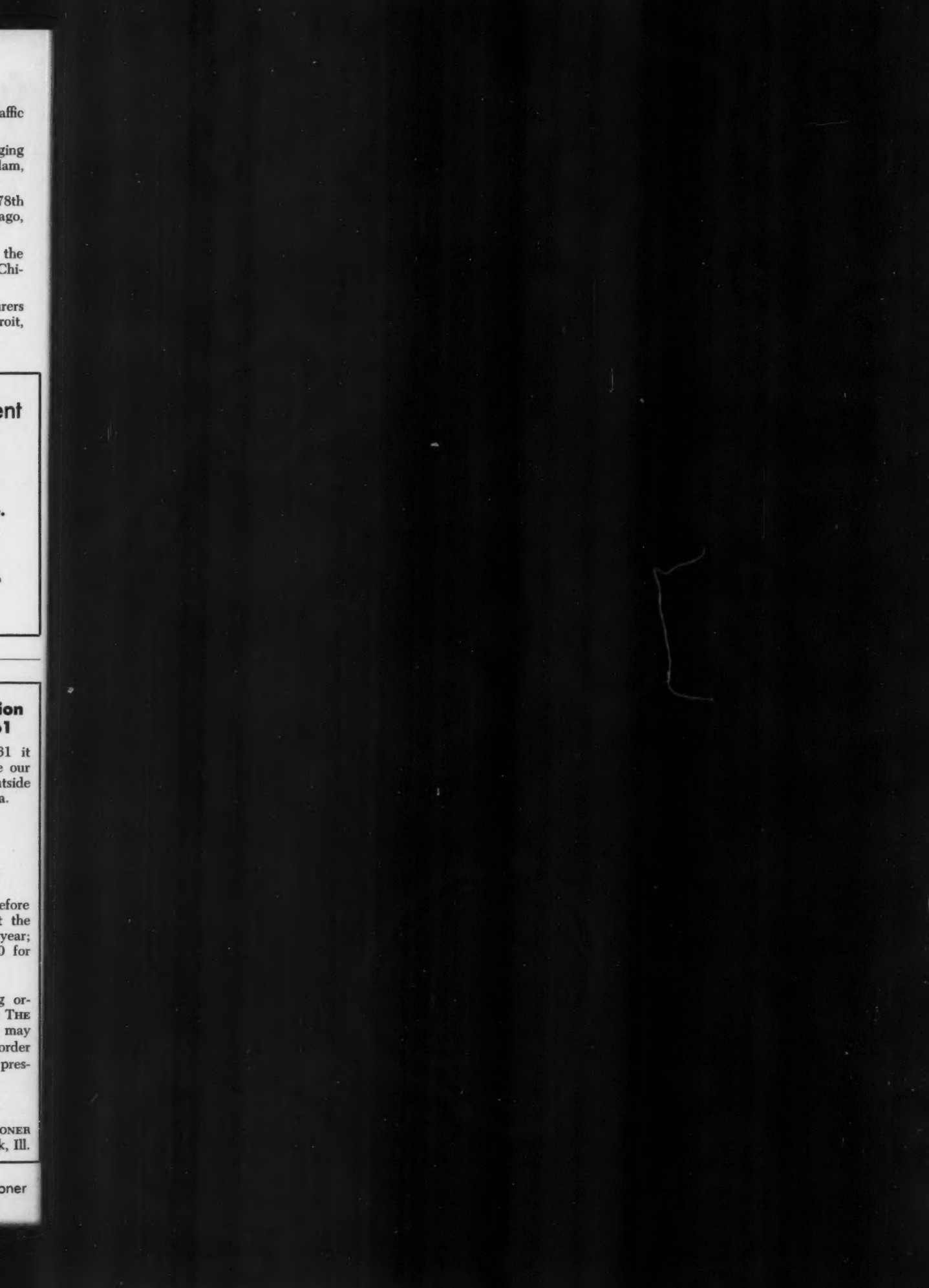
The new rates will be:

one year	$ 7.00
two years	$10.00
three years	$12.00

Subscription orders received before January first will be entered at the present rates of $5.00 for one year; $7.50 for two years and $10.00 for three years.

If you have been considering ordering a personal subscription to THE MANUFACTURING CONFECTIONER may we suggest that you send your order today and take advantage of the present lower rates.

Circulation Department
THE MANUFACTURING CONFECTIONER
418 North Austin Blvd., Oak Park, Ill.



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For Sale Piecemeal!

Equipment for Manufacturing of Hard Candy, Marshmallows, Peanut Products and Cookies

OF PLANT NO. 6 — CURTISS CANDY COMPANY — DALLAS, TEXAS

THESE OPERATIONS HAVE BEEN CONSOLIDATED INTO CURTISS CANDY COMPANY PLANTS IN CHICAGO

MODERNIZE YOUR PLANT

with this high production, top quality equipment

STARCH DEPT. FOR MARSHMALLOW, CREAM, ETC.

IMPORTANT!

This is an unusual opportunity to secure a completely automated marshmallow installation of most modern and sanitary design. The marshmallows are conveyed directly from the Mogul to the revolving sugar dusters, thru two Currie Cleaners and directly to the packing equipment. All conveyors are overhead, requiring minimum amount of space as well as least labor and insures positive sanitary control, eliminating possible fermentation. Can be purchased as a complete unit or any portion desired.

1—National Equipment Steel Mogul with Roller Chain, and Heavy Duty Depositor, Stainless Steel Hopper, Starch Shaker, Vibrator, Explosion Proof Motors.
4—Hydroseal Pump Bars, 1 triple, 3 double.
1—Currie Starch Tray Loader.
1—Currie Starch Tray Stacker.
4—Huhn Starch Conditioning Drums with Explosion Proof Motors—2 for heating, 2 for cooling, with complete Starch Conveying and Elevating Equipment for continuous automatic operation with the Mogul.
2—Allis Chalmers Metal Starch Cleaners with metal screw conveyors and elevators.
2—National Equipment 1000-lb. Syrup Coolers, all Stainless Steel.
1—50 inch Werner Snow Flake Cream Beater, largest production.
2—Currie Center Cleaners.
Over 10,000 Starch Trays with Starch.

BAKING PLANT

MOST MODERN EQUIPMENT FOR DEPOSITING AND BAKING A COMPLETE LINE OF COOKIES FOR HIGHEST PRODUCTION WITH NO HANDLING THROUGHOUT, UP TO THE PACKING OPERATION.

1—32" Green Wire Cut Machine, directly feeding into:
1—Advance 32 inch wide 100 ft. long Sandvik Steel Band Oven with 40 ft. enclosed Cooling Section. All stainless steel and Glass Brick enclosed with 180° Wire Turn Table and Additional 100 ft. of Cooling Conveyor.

SUITABLE FOR PRODUCING COOKIES SEPARATELY OR FOR SANDWICH COOKIES.

HARD CANDY DEPARTMENT

5—Forgrove Late Style 22B Hard Candy Wrappers, New 1956, with Feeders and Feeding Conveyors and take-away Conveyor, directly to the Filling Machine. Keeps flavors separately or mixes them. Extra plates for wrapping baby pop suckers as well as barrels, etc.
2—Simplex High Dome, Late Style, Tilt, Hard Candy Cookers.
1—Werner Super, Largest Production Hard Candy Ball Machine, with 42 inch length Rollers.
2—Berks Automatic Batch Mixers.
1—Racine EP Sucker Machine with Baby Pop Rollers.
1—Hansella Vertical Batch Feeder 73C with 2 sets Sizing Rollers.
1—Hansella Batch Roller 19H with Automatic Hydraulic Lift.
1—Hansella 4 Rope Sizer.
1—Hildreth Form 6 Puller with speed control.

COOKING-MIXING OF MARSHMALLOW, CREAM, ETC.

2—110-gal. Savage Marshmallow Beaters.
4—80-gal. Savage Marshmallow Beaters. Each Marshmallow Beater has its own Stainless Steel Measuring Tank installed above it which gives an essential absolute control of raw materials used.
1—Groen Batch Mixer, 300-gal. cap. Jacketed, 40-lb. Steam Pressure, Stainless Steel inside with Stainless Shaft Agitator, for precooking ingredients for Marshmallow Beaters.
1—Lehman Steel Ribbon Jacketed Mixer, Stainless Steel inside, motor driven, 6000-lb. capacity.
1—Lehman Mixer, Steam Jacketed, Paddle type, 6000-lb. capacity, motor driven.
1—Acme 75-gal. Stainless Steel Kettle with Stainless Steel Pump.
1—Champion Single Arm 3-bbl. Mixer with Stainless Steel Jacket.
1—Two Barrel Champion Single Arm Mixer with Stainless Steel Jacket.
1—Flour Sifter Blender and Elevator for above Mixers.
1—Peerless 1-bbl. Single Arm Mixer.
2—75-gal. Copper Kettles, Steam Jacketed.
1—50-gal. Glass Lined Tank.
1—Hobart M-80 Four Speed Mixer.
1—Champion 80-qt. Mixer.
1—20-qt. Late Style Hobart Mixer.

RESUME OF WRAPPING-FILLING-SEALING

5—Forgrove Late Style 22B Hard Candy Wrappers. New 1956, with Feeders as described under Hard Candy Department.
1—DF Package Machinery Wrapper with Card Feed.
1—Standard Knapp 429 Case Sealer with 20 ft. Compression Unit.
2—Standard Knapp 429 Case Sealers with 10 ft. Compression Unit.
1—Ferguson Packomatic Case Sealer with 6 ft. Compression Unit.
1—Doughboy Sealer CBS-ATC, for polyethylene.
1—Hayssen 5-9 Wrapping Machine with Electric Eye, take-away chain.
1—Hayssen 7-13 Wrapping Machine.
3—Speedee Fillers.
1—Speedee Sealer.
2—Syntron Fillers with conveyor and Top Sealing Machine with Electric Controls.
1—Special Bag Filler.

NUT ROASTING DEPT. AND PEANUT BUTTER DEPARTMENT

1—Bauer #322 Peanut Roaster with Color Controls.
2—Bauer #346 Blanchers with Picking Tables.
2—300-lb. Oil Peanut Friolators.
1—Burns Peanut Butter Mill.
1—9-Plate Filter Press, motor driven.

MACHINE SHOP AND MISCELLANEOUS

Monarch Lathe, Small South Bend Lathe, Heavy Duty Power Saw, Small Metal Brake, Drill Press, Grinder, Buffers.
1—Chrysler Air Temp 5-ton Compressor.
1—Prater Pulverizer.
3—Wire Stitchers.
1—21 ft. Packing Conveyor, motor driven.
2—Champion Twin Head Wire Stitchers.
Lift Trucks, Skids, etc.

EQUIPMENT PRICED VERY LOW FOR QUICK REMOVAL

Inspection Invited!

These Offerings Are Subject To Prior Sale

WRITE, WIRE, PHONE COLLECT for complete details and for our special low prices

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UNION
Rebuilt Machinery
Established 1912

THE MANUFACTURING CONFECTIONER'S CLEARING HOUSE

Address replies to box number, c/o The Manufacturing Confectioner 418 N. Austin Blvd., Oak Park, Illinois

MACHINERY FOR SALE

Factory closed. Make me offer on like-new DF model Peppy Dipper, used one week. Cap. 300 lbs. Box 1161, The MANUFACTURING CONFECTIONER.

FOR SALE

Bonus Cluster Machine.
Model K # 3 Savage Fire Mixers.
20 gal. & 50 gal. Model F-6 Savage Tilting Mixers, copper kettle.
200 lb. Savage Oval Top Marshmallow Beaters.
Cut-Rol Cream Center Machines.
Bostonian Friend Hand Roll Machine.
50" two cylinder Werner Beater.
1000 lb. Werner Syrup Cooler.
150 lb. to 500 lb. Chocolate Melters
24" and 32" N.E. Enrobers.
32" Kihlgren Stringer.
Simplex Gas Vacuum Cooker.
Simplex Steam Vacuum Cooker.
Savage Cream Vacuum Cooker.
600 lb. Continuous Vacuum Cooker.
Form 3 Hildreth Pullers.
Form 6 Hildreth Puller
National Cherry Dropper.
6' and 7' York Batch Rollers.
National Wood Starch Buck.
National Steel Starch Buck.
Bausman Twin Disc Refiner Unit.
Ball and Dayton Cream Beaters.
30 Gal. Stainless draw off steam jacketed kettles.
350 lb. cap. Resco chocolate melting and tempering kettle.
Savage and Racine Caramel Cutters.

SAVAGE BROS. CO.
2636 Gladys Ave. Chicago 12, Ill.

One Package Machinery FA overwrapping machine, serial no. 8778, good condition, reasonable price. Box 1162, The MANUFACTURING CONFECTIONER.

For sale: gas vacuum cooker, cream beaters, chocolate melters, stoves, cut roll machines, pulling machines, batch rollers, steam agitating kettles, water cooled slabs, marbles, Hobart beaters, copper kettles, cutting machines, clear toy molds, etc. S. Z. Candy Machinery Co., 1140 N. American St., Philadelphia, Pa.

MACHINERY WANTED

Racine bantam or junior depositor. Ricelli Candies, 15430 West 7 Mile, Detroit 35, Michigan.

Classified Rates

Lightface type — 10¢ per word
Boldface type — 20¢ per word
Box number — $1 additional
Minimum charge — $2.50
10% discount for advance payment.

Classified display advertising is charged at the rate of $8.00 per column inch for less than ¼ page. Column is 13 picas. ¼ page and over charged at regular advertising rates.

SITUATION WANTED

Nearing sixty-five deadline. Will consider consultant capacity in all phases of management, industrial engineering, layouts, technology and personnel. Have no B.S. and want no assignment longer than the shortest time to obtain results expected. Your plant is not too large or your problem too complicated. Box 1163, The MANUFACTURING CONFECTIONER.

Instructor—Bubble gum base, general candy pan line, and all phases of candy. Will teach anywhere in the world. Box 1068, The MANUFACTURING CONFECTIONER.

MISCELLANEOUS

Folding Candy Boxes: All sizes carried in stock for prompt delivery. Plain, stock print or specially printed. Write for our new catalog of every-day and holiday fancy boxes, and all paper products used in the manufacture and packaging of candies. **Paper Goods Company, Inc.,** 270 Albany Street, Cambridge 39, Mass.

WIRE FORMS: RACKS
WIRE DISPLAYS:
Made to Specifications
LOW PRICES WRITE
Fastorm Wire Division
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ALWAYS AT YOUR SERVICE

In Cocoa Since 1899

EMIL PICK CO.
COCOA BROKERS

80 WALL ST. NEW YORK, N. Y.
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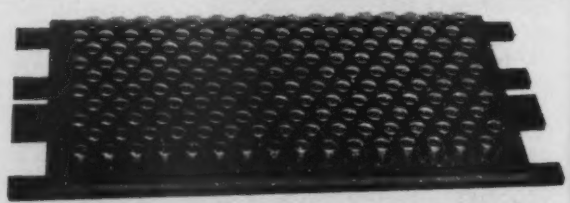
COCOA BEANS — COCOA BUTTER
Cocoa and Chocolate Products

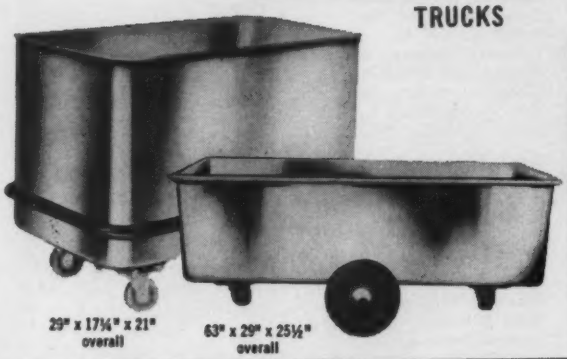


ALUMINUM CANDY MOULD PATTERNS
for use with mogul starch equipment
We are now using the new hard burnished finish which eliminates the break-in period. They pay for themselves in a few weeks.
CINCINNATI ALUMINUM MOULD CO.
Dept. M, 1834 Dana Ave., Cincinnati 7, Ohio

cut handling and storage costs...

WEAR·EVER ALUMINUM

TRUCKS



29" x 17¼" x 21" overall

63" x 29" x 25½" overall

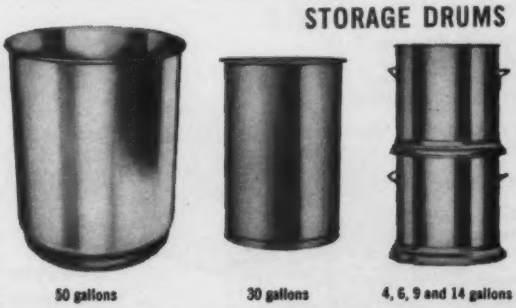
MOBILE BINS

38 gallons

30 gallons

27 gallons

STORAGE DRUMS



50 gallons

30 gallons

4, 6, 9 and 14 gallons

TRANSPORT BOXES

20" x 15" x 5"

22" x 20" x 1¼"

34 3/16" x 16⅛" x 12"

22½" x 20½" x 6½"

UTILITY ITEMS

16, 21, 48, 63, 74, 122 qts.

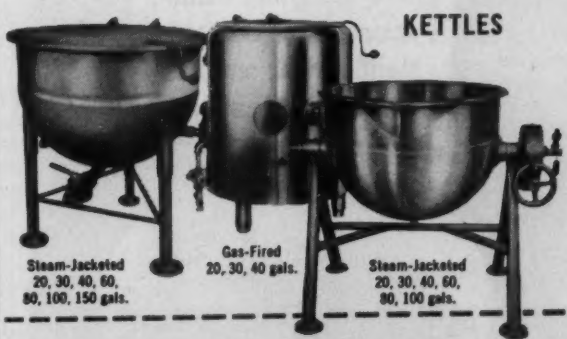
45" and 53"

18, 24, 32, 48 ozs.

10, 12, 14, 16 qts.

2 qts.

KETTLES



Steam-Jacketed 20, 30, 40, 60, 80, 100, 150 gals.

Gas-Fired 20, 30, 40 gals.

Steam-Jacketed 20, 30, 40, 60, 80, 100 gals.

Now you can speed production, and simplify your handling or storage problems with standard, readily available Wear-Ever plant service items like these.

Wear-Ever's complete line of handling, storage and service equipment is constructed from specially developed, tough, hard-wrought aluminum alloys to assure longer life.

Send for your free copy of our new catalog showing the complete Wear-Ever line.

New Catalog Ready! *SEND TODAY!*

Wear-Ever Aluminum, Inc.
508 Wear-Ever Building, New Kensington, Pa.

GENTLEMEN: *I'd like to learn more about ways in which Wear-Ever's line can help me.*

☐ Send me your catalog ☐ Have your representative see me

NAME_____

TITLE_____

COMPANY_____

STREET_____

CITY_____ ZONE____ STATE_____

WEAR·EVER ALUMINUM, INC., FOOD SERVICE EQUIPMENT DIVISION, NEW KENSINGTON, PA.

Sucrest
LIQUID SUGARS
FAST, DIRECT DELIVERIES

From our **modern ion exchange** refineries at New York and Chicago roll the industry's needs for Liquid Sugars — sugars that stay uniform in quality **day** after **day**. There's no need for process and formula changes . . . and you benefit from big savings in time, space and production. We supply a complete line of top-quality Liquid Sugars to meet any need. Our Technical Staff is always available . . . services range from designing installations to the development of new formulas **to your specifications.**

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In the Midwest, call INLAND SUGAR COMPANY
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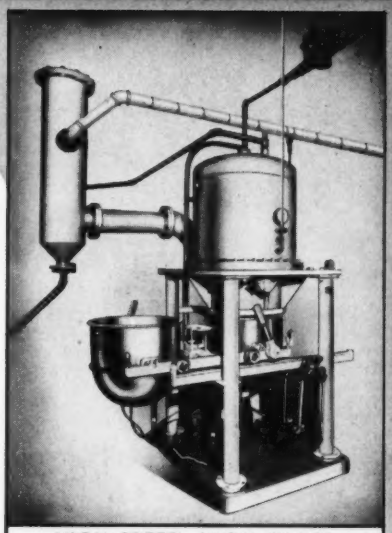

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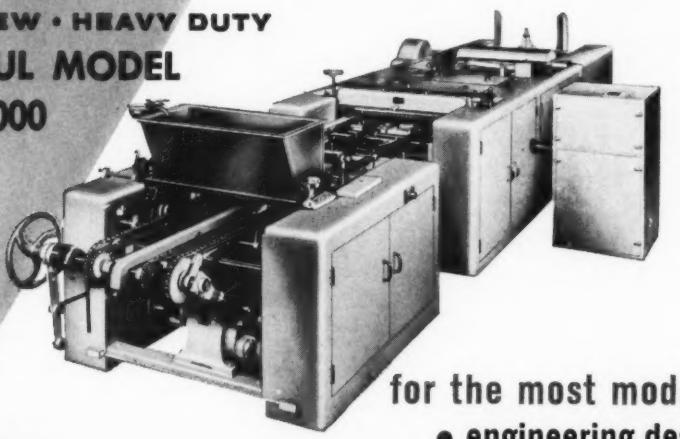

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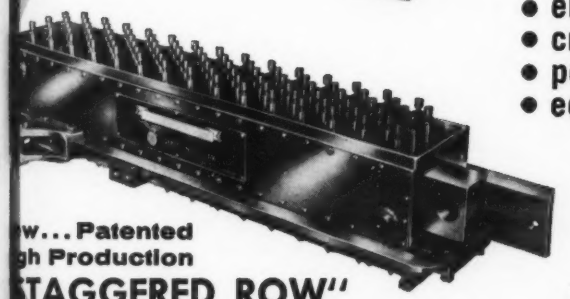

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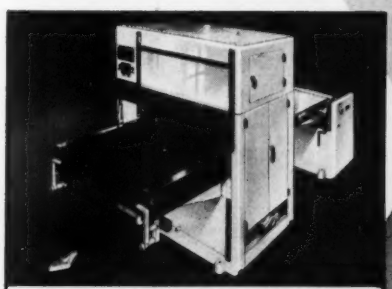

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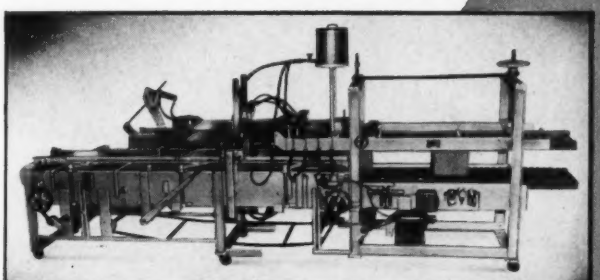

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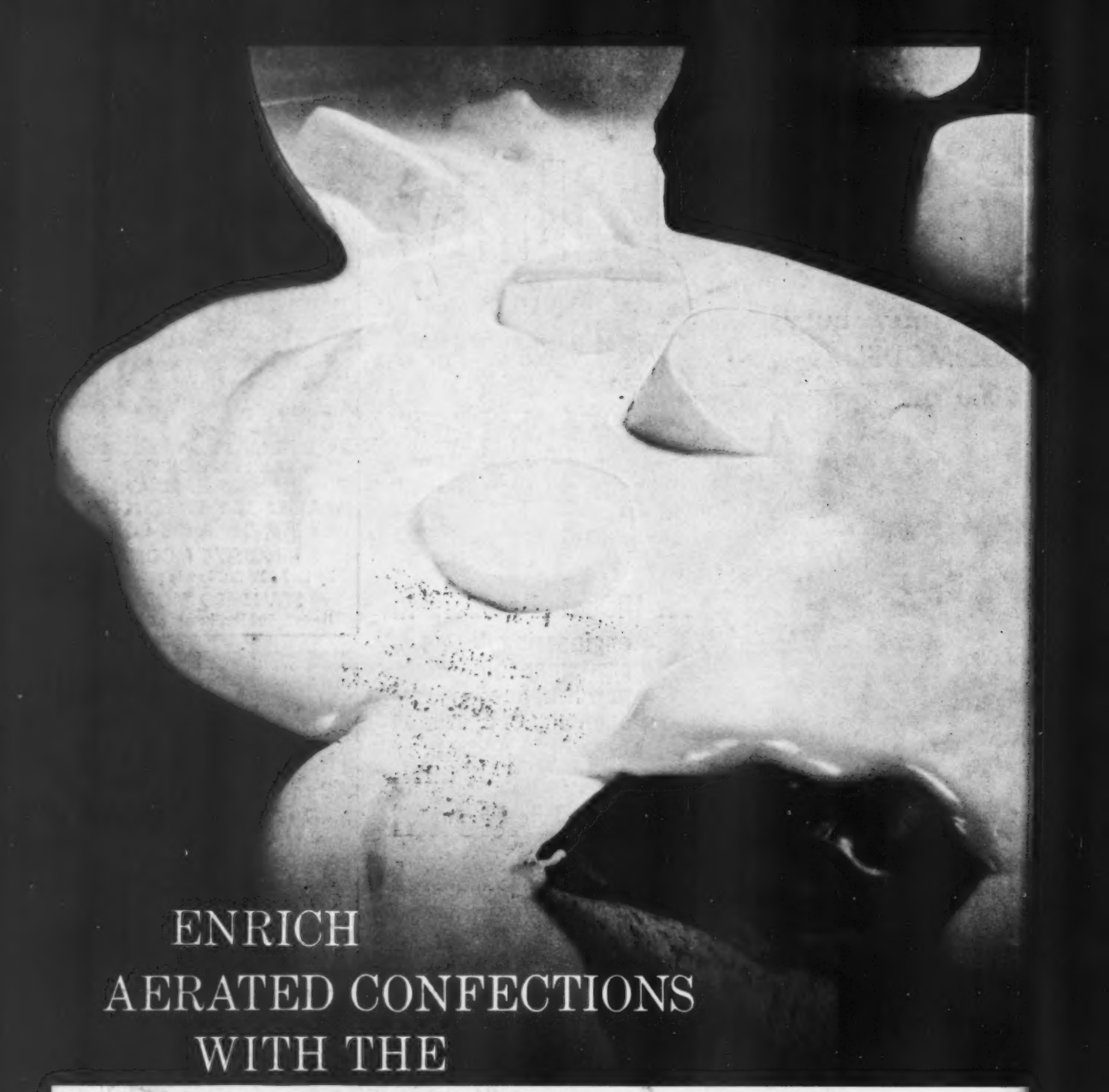

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